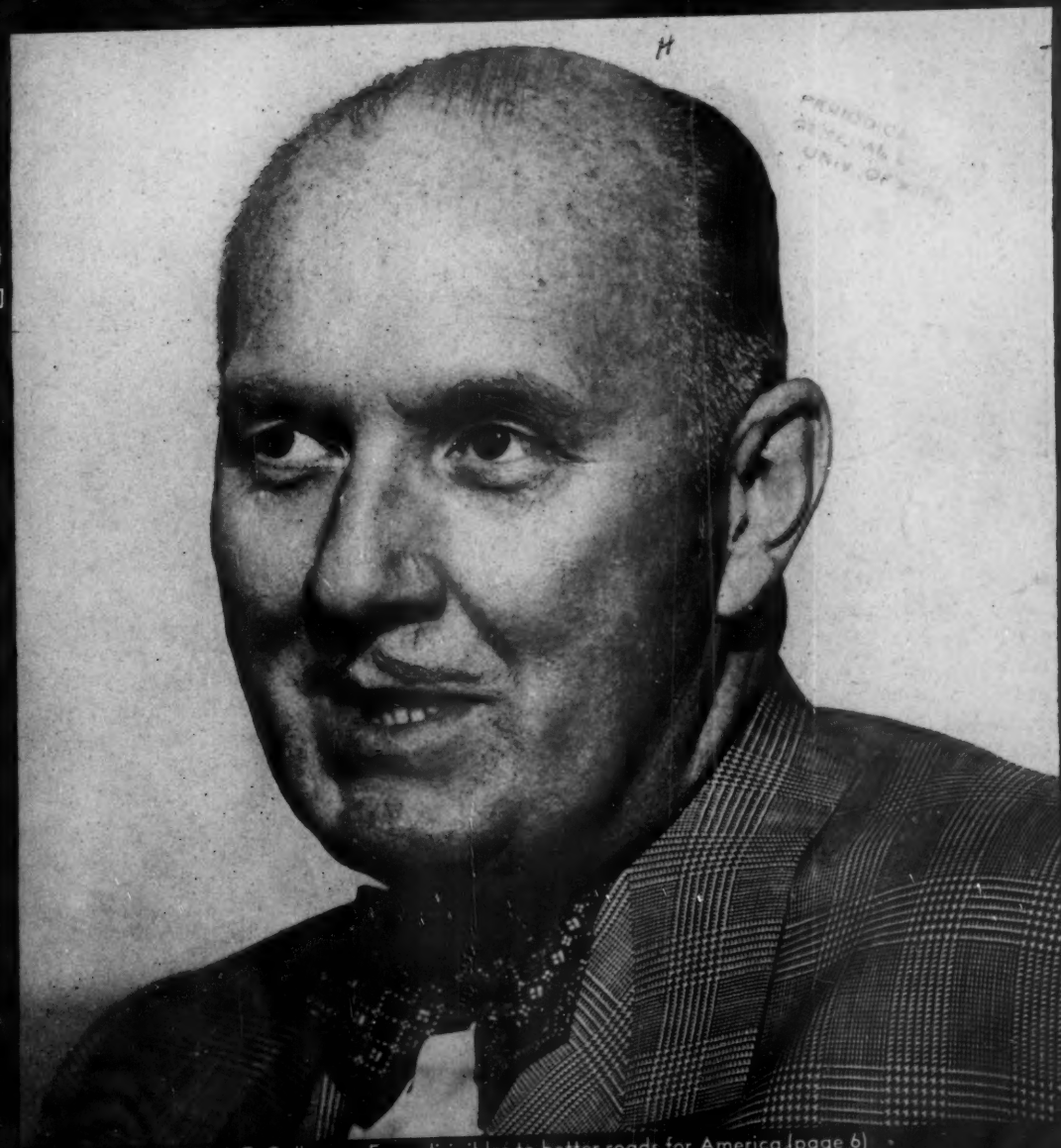
BUSINESS WEEK

AUG. 7, 1948



J. T. Callaway: From dirigibles to better roads for America (page 6)

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THE COVER

It isn't often that a man can have his job and his hobby tied up together. J. T. Callaway (cover), president of the American Road Builders' Assn., is one of those lucky fellows. His job for 30 years, as assistant to the vice-president of Goodyear Tire & Rubber Co., has been—and still is—to promote the wider use of rubber, particularly in tires.

His hobby, too, has been to "sell" rubber tires into new uses. Ever since he first saw a construction job (in the man-and-a-mule era) he's had this idea: that "floating" construction and road-making equipment on rubber would cut down the sweat, up the power, and increase the output of such machinery.

• **Texas Thinking**—"Tom" Callaway is a Texan; he thinks big. He sees the construction industry as a potent economic force in postwar expansion of highways, railroads, airports, strip mining, logging, reclamation, flood control. In 1944-45 he stumped the nation selling the industry and its part in this country's future. When his term as president of the Construction Industries Assn. ended in February, 1947, he was elected president of A.R.B.A.—the first representative of any industry to be picked for the job.

Callaway was born in Temple, Texas, 56 years ago. After the war he tried dirigible selling but saw only a dim future, so he went into tire promotion. This brought him close to equipment makers and users, and now to his present appointment.

• **Precedent Breaker**—"Texas thinking" led him to promote this year's king-size outdoor road show. Ask him why, and he'll tell you: "Let's put the huge equipment in its natural environment, out where it's used, where there are no weight or space problems, and where the sky's the limit." This year's 30-acre show, with its estimated $10-million worth of equipment, is evidence that he's a good salesman.

—Complete story on the Road Show starts on page 28. Cover photograph by Rus Arnold

BUSINESS OUTLOOK

BUSINESS WEEK
AUGUST 7, 1948

Congress is talking of giving the Federal Reserve Board more power over bank credit and junking the rest of President Truman's anti-inflation program.

That may sound like a weak dish of tea. But the results could be surprising. Credit control is strong medicine.

Selective price controls wouldn't work now, even if Congress should pass them. They would simply revive the shortages and black markets of OPA days.

But a hard-boiled program for tightening bank credit could work. Theoretically anyhow, it could stop the boom in its tracks. That's why the Administration has never dared use it.

•

The Reserve Board doesn't mean to get tough, even if it gets new powers.

It doesn't want to take the blame for turning a boom into a bust. And in any case, it has to keep its policies in step with the Treasury. The Treasury wants easy money.

The board is asking Congress for authority to add 10% to the reserve requirements of all banks. But in the same breath it has renewed its promise to support the market prices of government securities at par.

•

Easy money in the government bond market means easy money for everybody. Hence, the Reserve Board can't put a real squeeze on the banks and support the prices of government bonds, too.

Adding 10 percentage points to required reserves wouldn't change the situation over the long pull. Banks could sell some of their government securities to build up their reserve balances. They wouldn't have to liquidate loans.

But the board is playing a short-term game. It thinks that raising reserves would keep the banks under pressure—at least temporarily. And that would make them more reluctant to take on new loans.

•

The danger is that the board might slip. A mistake in timing, a little too much pressure in the wrong place, and the whole credit balloon might pop. In all probability, that would be the end of our boom.

It was the Reserve System that pulled the trigger in 1920 and 1937. And Reserve policy had at least something to do with the 1929 crash.

Of course, all three of those booms were past their prime and ready for collapse anyhow. But then, what about the present boom?

•

Bank loans to business are rising again. That's a bad omen to anyone who hopes that prices will steady down.

Business loans by the weekly reporting member banks of the Federal Reserve System gained about $160-million during the first three weeks of July. That isn't a lot, taken by itself. But it shows that the money supply is growing again, feeding the growth in prices and wages.

A rapid rise in business loans was one of the first signs of renewed inflation in the last half of 1947.

In the first half of this year, business loans by the reporting banks dropped about $500-million. During that time, prices were fairly stable.

•

New price increases are coming thick and fast.

Ford says that the price of its new cars will go up again in a few days. Wage increases and higher steel prices are named. This is the second jump

in two months for Ford. When it brought out its new model in June, it marked up prices $85 to $125.

Allegheny Ludlum Steel put through a general boost in stainless steel prices, the first in two and a half years.

Copper producers (except Kennecott) hiked their prices 2¢ a lb. to 23½¢. This comes right on top of last week's rise of 2¢ in lead and 3¢ in zinc (BW-Jul.31'48,p68).

•

High prices for hides—and shoes—persist in spite of a thin background.

What keeps hides up? The seasonal low in cattle slaughter.

But the future for hides isn't too robust. A study just issued by the Chase National Bank, New York, names three major factors which should bring prices down: (1) Domestic hide production is 50% above the 1935-39 average; (2) hide imports are the largest since the war; and (3) domestic shoe production has dropped sharply from its postwar peak; meanwhile, shoe inventories are rising.

•

Here's a new twist on the familiar story of rising prices: Two subsidiaries of U. S. Steel have asked the railroads to cut their rates 40% on steel shipped from Pittsburgh to New York and Detroit.

Big Steel argues that the cuts will be in the rails' own interest. Otherwise, traffic will switch to other carrier.

Since U. S. Steel has just tucked an increase of $9.34 a ton under its belt, this looks very much as though it were asking the roads to pick up the check for its dinner. But there is more to the story than that.

Many customers of the steel mills have decided to use trucks instead of rail transportation. The combination of higher freight rates and the new f.o.b. pricing system is too much for them.

But the steel mills aren't set up for large-scale truck shipments. They haven't the approaches and loading platforms. If any real volume of traffic switches over, they will be in a pickle.

•

It looks as if the oil industry will skin through the summer driving season without any important gasoline pinch.

Production beyond the highest hopes has done it (BW-Jun.19'48,p10). Gasoline output now is a sensational 765-million gal. a week.

Labor Day will mark the end of peak demand. We approach that significant date with storage stocks still very close to 100-million bbl.

Such stocks, before the war, would have looked suspiciously like a surplus. Nowadays, they are no more than comfortable.

•

There's a windfall from record gasoline output: rapid additions to stocks of byproducts (and to oil company earnings).

Stocks of distillate, for example, rose no less than 3-million bbl. in the week ended July 10; another 2.8-million bbl. in the July 17 week.

Get all these byproducts you can into your tanks for winter now.

•

Coal supply looks better and better as the year goes on.

Bituminous output up to July 24 was 319-million tons. That's only 7% behind last year. Just after last spring's strike we were 20% behind.

The six-day stoppage in the captive mines during July scarcely shows up in the total. Other mines snapped up the coal cars that the captive mines would have used. And their output increased accordingly.

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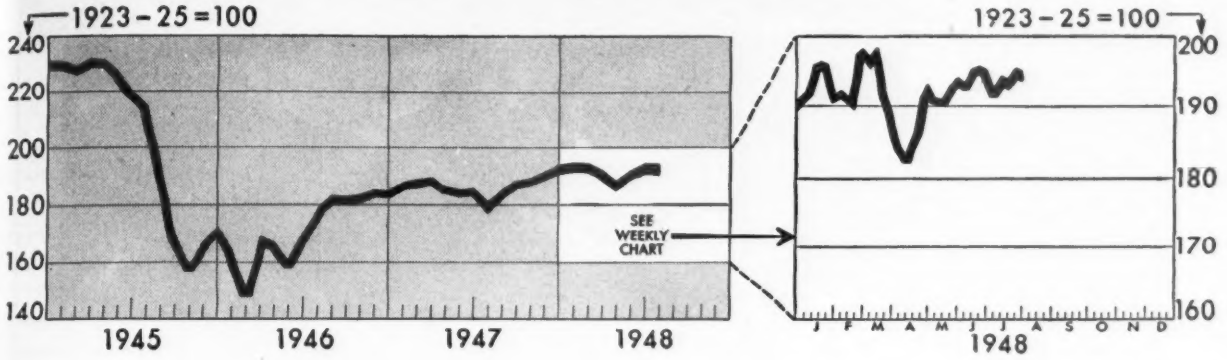
FIGURES OF THE WEEK



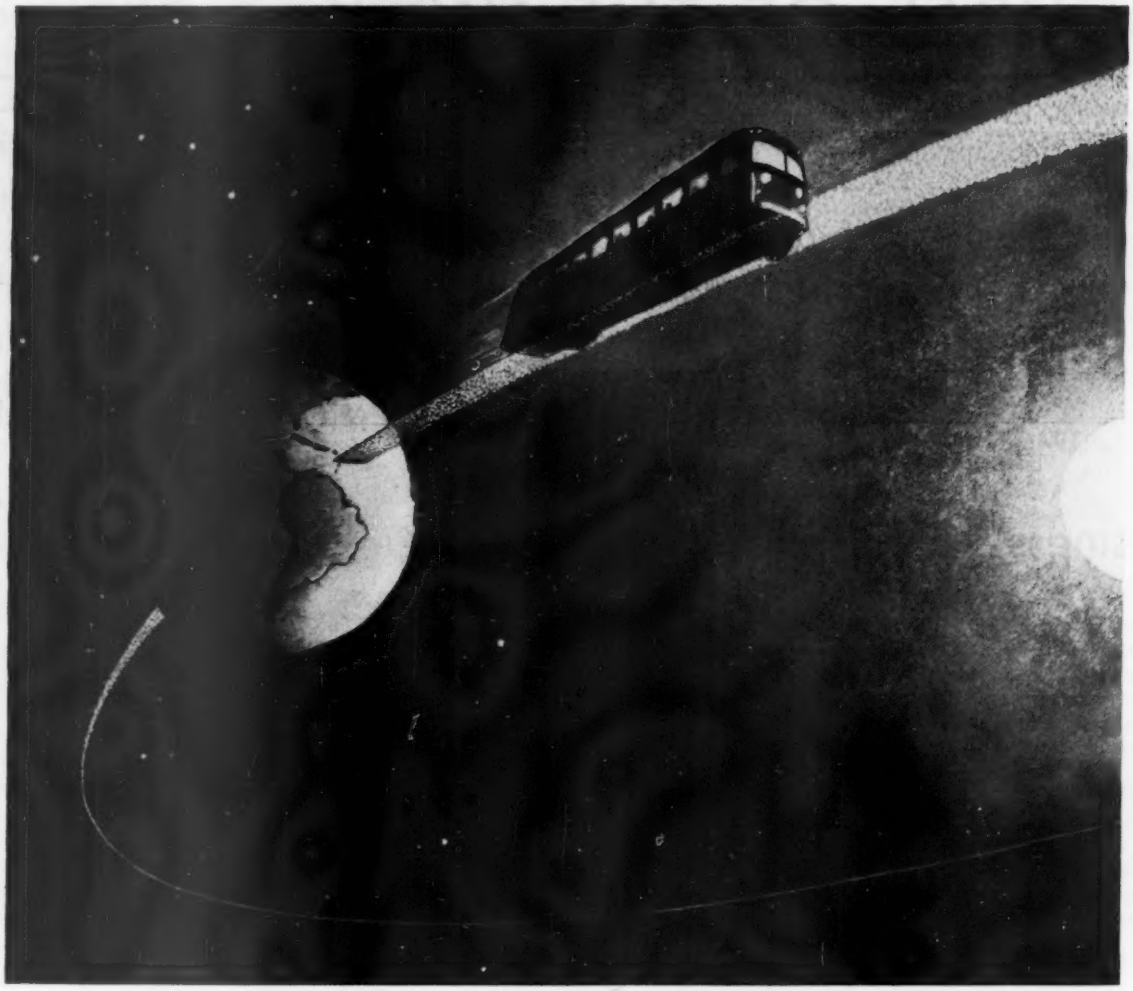
	§ Latest Week	Preceding Week	Month Ago	Year Ago	1941 Average
Business Week Index (above)	*194.9	†195.4	192.5	185.7	162.2
PRODUCTION					
Steel ingot operations (% of capacity)	94.2	93.1	90.3	94.9	97.3
Production of automobiles and trucks	113,706	†118,797	112,307	97,712	98,236
Engineering const. awards (Eng. News-Rec. 4-week daily av. in thousands)	$22,403	$24,035	$26,816	$18,738	$19,433
Electric power output (million kilowatt-hours)	5,352	5,342	5,166	4,806	3,130
Crude oil (daily average, 1,000 bbls.)	5,455	5,448	5,484	5,088	3,842
Bituminous coal (daily average, 1,000 tons)	2,022	2,037	2,133	1,956	1,685
TRADE					
Miscellaneous and L.C.L. carloadings (daily average, 1,000 cars)	78	78	82	84	86
All other carloadings (daily average, 1,000 cars)	69	70	67	69	52
Money in circulation (millions)	$27,821	$27,864	$27,900	$28,129	$9,613
Department store sales (change from same week of preceding year)	+9%	+9%	+7%	+5%	+17%
Business failures (Dun & Bradstreet, number)	98	91	103	69	228
PRICES (Average for the week)					
Spot commodity index (Moody's, Dec. 31, 1931=100)	433.2	432.6	434.6	418.8	198.1
Industrial raw materials (U. S. Bureau of Labor Statistics, Aug., 1939=100)	283.2	276.9	275.0	268.3	138.5
Domestic farm products (U. S. Bureau of Labor Statistics, Aug., 1939=100)	364.1	378.8	383.9	370.0	146.6
Finished steel composite (Steel, ton)	$89.09	†$89.09	$80.27	$75.41	$56.73
Scrap steel composite (Iron Age, ton)	$43.16	$43.16	$40.91	$41.63	$19.48
Copper (electrolytic, Connecticut Valley, lb.)	21.500¢	21.500¢	21.500¢	21.500¢	12.022¢
Wheat (Kansas City, bu.)	$2.16	$2.19	$2.24	$2.27	$0.99
Sugar (raw, delivered New York, lb.)	5.78¢	5.73¢	5.60¢	6.19¢	3.38¢
Cotton (middling, ten designated markets, lb.)	32.52¢	34.05¢	35.51¢	35.70¢	13.94¢
Wool tops (New York, lb.)	$1.858	$1.941	$1.963	$1.640	$1.281
Rubber (ribbed smoked sheets, New York, lb.)	24.95¢	24.88¢	23.12¢	15.57¢	22.16¢
FINANCE					
90 stocks, price index (Standard & Poor's Corp.)	126.7	128.8	133.4	124.7	78.0
Medium grade corporate bond yield (30 Baa issues, Moody's)	3.40%	3.38%	3.35%	3.16%	4.33%
High grade corporate bond yield (30 Aaa issues, Moody's)	2.83%	2.82%	2.80%	2.56%	2.77%
Call loans renewal rate, N. Y. Stock Exchange (daily average)	1½%	1½%	1½%	1½-1½%	1.00%
Prime commercial paper, 4-to-6 months, N. Y. City (prevailing rate)	1⅜%	1⅜%	1⅜%	1%	½-¾%
BANKING (Millions of dollars)					
Demand deposits adjusted, reporting member banks	46,839	46,726	46,414	47,145	††27,777
Total loans and investments, reporting member banks	63,083	63,175	62,646	63,479	††32,309
Commercial and agricultural loans, reporting member banks	14,490	14,502	14,345	11,967	††6,963
Securities loans, reporting member banks	1,732	1,797	1,932	2,118	††1,038
U. S. gov't and gov't guaranteed obligations held, reporting member banks	34,870	34,879	34,666	38,739	††15,999
Other securities held, reporting member banks	4,354	4,318	4,240	4,232	††4,303
Excess reserves, all member banks	840	840	680	742	5,290
Total federal reserve credit outstanding	21,723	21,888	21,900	22,310	2,265

*Preliminary, week ended July 31st.

†Revised.

§Date for "Latest Week" on each series on request.

††Estimate (B.W.—Jul.12'47,p.16).



LEADING THE EARTH BY SIX LAPS

A distance equal to seven times around the earth's orbit . . . more than 4 billion miles . . . was covered last year by the motor bus lines of America. To this vast mileage, add that of our 6½ million trucks; the total, extended in a straight line, would reach out into space far beyond the limits of our solar system.

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WASHINGTON OUTLOOK

CONGRESS IS DUCKING the inflation issue now. But inflation will still haunt a Dewey Congress next year—as a military question, however, rather than a matter of groceries.

The special session now winding up will do no more than this:

(1) Empower the Federal Reserve to jack up bank reserve requirements. The idea is to tighten business credit. This could put the screws on—but it probably won't, much. Banks have plenty of government bonds to sell—and the government will keep providing a market (page 9).

(2) Revive easy money mortgages for veterans (and others). That's inflationary, of course, but politically inescapable.

•

Demands for controls next year could only come because of bigger armament spending.

The general price level may still be trending upward. But food prices will be coming down off their fall peaks—and it's rising meat prices that spell inflation to politicians, and housewives.

Even so, you won't catch the Dewey team kissing off the idea of price controls and rationing completely next year.

Dewey knows that if we go, say, to a $5-billion-a-year program of arming Europe there would have to be controls. Such a program is not totally fantastic; U. S. military men are now talking to the Europeans in those terms—and Dewey knows it.

Dewey knows too that it would take priorities and price ceilings to squeeze that much more hardware out of an economy booming along at capacity. It's because he realizes this that Dewey sometimes says: A little recession would make things easier, in a way.

•

TRUMAN'S CAPITOL HILL CAMPAIGN for reelection has fizzled out—just as his first anti-inflation drive of last November did.

Despite all Paul Porter's efforts at generalship, administration witnesses before congressional committees have hardly bothered to conceal their misgivings.

Treasury Secretary Snyder and Federal Reserve Chairman McCabe disagree on whether credit controls should cover banks outside the Reserve System. Snyder opposes price controls and is lukewarm on any credit controls.

"As a whole," sums up ex-Reserve Chairman Eccles, "it doesn't make economic sense."

You would hardly guess it from the newspaper accounts, but the Truman Administration's split personality shows up most clearly inside the green covers of Truman's own midyear economic report.

This was emphasized when Truman broke precedent: He separated his political recommendations to Congress from the economic analysis by Nourse, Keyserling, and Clark, his Council of Economic advisers.

The two just don't jibe.

Truman: ". . . Gathering inflationary forces . . . day by day are undermining the foundations of postwar prosperity. . . ."

Nourse, Keyserling, and Clark: ". . . The basic conditions for continued prosperity appear to be sound. . . . We are not on the threshhold of an inflationary orgy of the runaway kind."

You would almost think Truman was debating with his council when he said: "Until the very eve of an economic collapse, many people are apt to grow more and more confident about the soundness of the economy."

•

The council has never sounded more confident of the inner health of the boom than it does in this week's 115-page analysis.

In the past, the council has insisted that the postwar boom rests on artificial props—that could be kicked away at any time. The props: a huge export surplus; inventory building; a high level of plant expansion.

Behind the flashy facade they saw: a steady fall in real purchasing power; savings on the downgrade; both business and consumers turning to bank credit to meet capital needs.

Today, the council sees a prettier picture.

The export surplus has dropped from a peak rate of $12-billion a year in 1947 to $8-billion—without puncturing the boom. Of course, ECA will push it up again later in the year, but not to 1947 levels.

The inventory spree has ended (page 22); that didn't hurt either. The council likes the looks of the present inventory balance through all channels of trade, sees only a "cautious moderately rising trend."

On capital expansion, the council no longer fears an early drop-off. The rate of investment "seems limited not so much by demand or funds as by the supply of materials." Also, a shift of emphasis to new equipment rather than new buildings indicates the main objective now is cost reduction and technical innovation, rather than crude capacity increase. And the new capital is coming

from retained earnings and security issues, not from the banks.

So, two of the once shaky-looking props haven't let us down with a crash; the third now looks plenty sturdy—to the council, anyway.

•

Consumer purchasing power—another preoccupation of the council—looks better, too.

Real disposable income per capita had been dropping—from $1,338 (1947 dollars) in '44 to $1,191 in the second quarter of last year. Now the drop has stopped; real income has held steady at about $1,200.

Similarly, the postwar downtrend in personal savings has been arrested. Savings, only 2.4% of disposable income a year ago, now are 6%.

•

Behind the spy-scare headlines is this much of a legitimate objective: an attempt to clean up the government's loose hiring methods.

Ferguson's Senate Investigating Committee has shown up inefficient channeling of FBI loyalty dossiers from agency to agency. For instance, the Commerce Dept. didn't have the loyalty file on young Remington when he was picked up from the Council of Economic Advisers.

Ferguson intends to hammer away at this laxity, in questioning other witnesses. And he will come up with some rough language demanding reform.

•

The same show is being played across the street before the Thomas Un-American Activities Committee. That's where the big sensations are coming from—but, of course, Thomas' main interest is in splashing a lot of names around.

In a nutshell, this is what the Elizabeth Bentley testimony adds up to—so far as the spy talk itself is concerned:

During the war, when Russia was an ally, Communist agents were able to pick up in Washington a good deal of more or less secret information—pretty much the same kind of unofficial dope legitimate newspapermen dug up.

Except for Remington, none of the people named in the Bentley story are any longer on the government payroll.

A "blue ribbon" federal grand jury has combed the Bentley story for a year without finding anything on which it could support an indictment.

•

ANOTHER TARIFF-CUTTING CONFERENCE is brewing—after all.

The State Dept. plans to spring the idea at the Aug. 16 meeting of the 23 nations that were in on the big tariff deal at Geneva last year. Preliminary soundings among the big trading nations are encouraging.

This won't be another Geneva, of course. The purpose this time is to round out last year's agreements, make them apply more broadly and to more nations.

Take sardines: We cut out tariffs last year—but only on the particular kind that Norway exports. This time we might dicker with Portugal on its kinds of sardines.

Similar situations exist on such commodities as glassware, fruits, cheese, many kinds of textiles.

•

Another objective of the Aug. 16 meeting: to act on applications of additional nations who want to get in on the tariff deals worked out last year—Poland, Greece, Italy, Denmark, perhaps others.

Newcomers would grant all concessions made in the multilateral agreements, get all the benefits.

•

A FOURTH-ROUND WAGE PATTERN is already becoming visible as the third round goes into the pay envelopes and statistical tables.

Here's what you can look for, next year:

How much? Watch the cost-of-living index and you'll know. Pay boosts in the first three rounds have paralleled the BLS index. April cost-of-living indexes for the last three years have been 130.9, 156.2, 169.3; wage-boost patterns for the three years have been 18½¢, the 15¢ "package," and 1948's 9¢ to 13¢ spread.

These have kept union labor almost even with inflation. The real gains have come in the extras, the fringes. From the extras that some unions got in the third round you can tell what the others will be asking for in the fourth round.

Health insurance. Kaiser-Frazer broke the ice in autos, Allegheny Ludlum in steel; U. S. Steel was on the verge, but upped wages instead.

Pensions. John L. Lewis is way out ahead on this; other union leaders need to catch up.

Annual wage. U.A.W.-C.I.O. scored this year with a 50-week guarantee for 10-year men at Metal Mouldings Corp. in Detroit.

Vacations. The ceiling is being punctured on the standard industrial pattern of one-week-after-one-year, two-weeks-after-five-years. Ford now grants a week and a half after three years; C.I.O. electrical workers get three weeks after 15 years at Sylvania, after 20 at Westinghouse and G.E.

Just a moment, please, I'll connect you with the Right Party...
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2. How can I get Weldwood Honeycomb cut to shape?
3. Can I use Weldwood Glue to repair my boat?
4. What is this "Armorply" I've been hearing about?
5. How much will it cost to panel my office with Weldwood?
6. I'm a furniture manufacturer. How's Tekwood for backings?
7. What are the available woods in Molded Weldwood Boat Shapes? What sizes?
8. What's this new "Korina" Weldwood?
9. Can Micarta be used for walls?
10. How can I get a permanently smooth finish on fir Weldwood?

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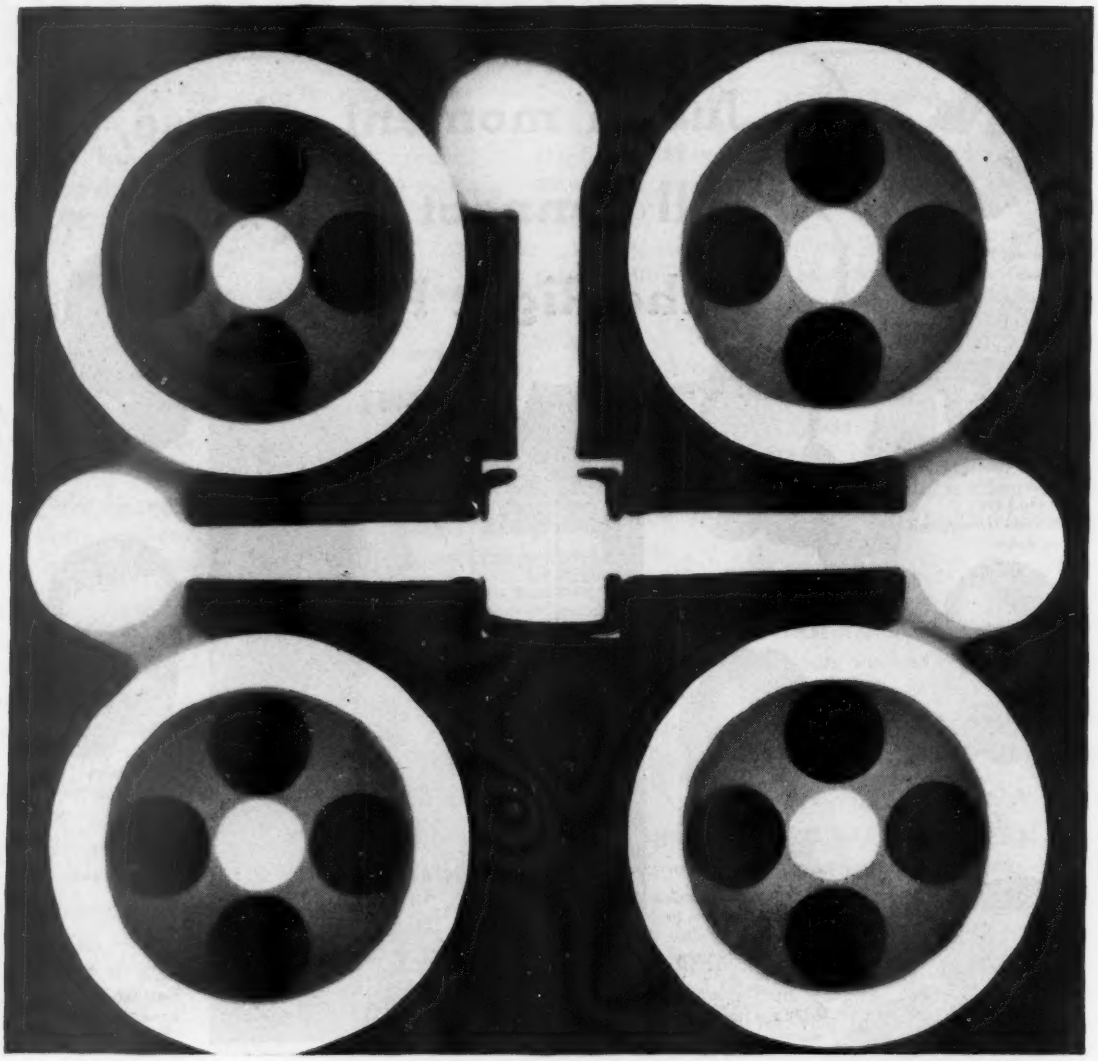


This shows you what money looks like

• The profit dollar looks bigger after an x-ray picture.

This is true in the steel business and it is true in automobiles, machine tools, shoes, confectionery and other businesses too.

A large Midwest foundry turned out a gear casting that could and did pass visual inspection. But machining disclosed shrinkage in tooth flanges too often to satisfy management.

General Electric Industrial X-Ray equipment, purchased by the company as an inspection and developmental tool, gave the answers.

(1) Change three small runners between riser and casting into a single, larger runner. (2) Heighten the riser; make it cylindrical.

Trouble disappeared.

This is no isolated incident. General Electric Industrial X-Ray units point the way to lower production costs, reduced overhead, fewer rejects for the $20,000 company and the $20,000,000 company. A unit often pays for itself on the first job. For details, write to General Electric X-Ray Corporation, Dept. H-33, Milwaukee, Wisc.

GENERAL ELECTRIC
X-RAY CORPORATION

BUSINESS WEEK

NUMBER 988

AUGUST 7, 1948

2-DOOR SEDAN
Buick Super
(factory list price)

1940—$995 = 13.8 head

1948—$1,845 = 7.5 head

(at average slaughter weight and price received by farmer in 1940 and July, 1948)

REFRIGERATOR
Westinghouse, 9-cu. ft.
(list price)

1940—$215 = 14.6 acres
(at average yield and price for year)

1948—$269.95 = 3.4 acres
(at average yield 1947, average price July, 1948)

What farmer produces buys a lot more manufactured goods than eight years ago, and . . .

Farm Income Will Stay High Despite Price Slips

This year's take may equal 1947 record of $30.5-billion. In any case, it's big enough to assure a lush market for businessmen.

As the illustrations above show, U. S. farmers are one group literally living off the fat of the land. Prices of manufactured goods have skyrocketed since the war. Yet the farmer today can buy these things with about one-fourth fewer units of his produce than the same goods would have cost in 1935-39.

• **Steady Demand**—This is good news to the American businessman. What's more, it'll be good for some time to come, for by this week it became clear that 1948 farm income will come mighty close to equaling last year's record—$30.5-billion. That means that—barring some unseasonable economic hailstorm—demand for farm equipment and other manufactured goods will be strong at least through 1950.

This hearty outlook contrasts sharply with what seemed to be brewing earlier this year. Grain prices fell (BW—Feb.14'48,p19), creating the suspicion that the glowing farm market would soon die out in grey ashes. Heady crop reports, showing that 1948 farm production would probably hit a high, only added to these fears. It looked a sure bet that the farmers were hell-bent on producing a surplus—and with it, low prices.

• **False Alarm**—Only the farmers were not alarmed—and with good reason; the scare was a false alarm. Most farmers had based their buying plans on the idea that farm prices would soon go down. The drop in grain prices surprised few of them, worried them not at all. In fact, for the poultrymen, dairymen, and livestock producers who had to buy their feed the drop was welcome. To them it means lower production costs and better net returns.

The market price in corn is an excellent barometer of farm income in general. Seldom is more than 20% of the

crop sold; most of it is fed to livestock on the farms where it's grown. So high prices for livestock and poultry products when corn is down assure a greater net income to the farmer.

Likewise, lower prices for other grains will not push down the net farm income. The reason is simple: Government buying and support prices provide fine props. The price per bushel may be down some, but the farmer will make more per acre because his 1948 crop is so much bigger than last year's.

• **The Cycle**—Here is the cycle which will keep farm income high:

(1) Any surplus of wheat and other food grains at home will be taken up in 1949 by the Economic Cooperation Administration for use abroad. And that, in turn, will provide foreign buying power for many other farm products.

(2) Big grain supplies will assure U. S. livestock and poultry producers of ample feed to boost production. The demand for meat in the U. S. is more than likely to keep riding high.

(3) Support prices will run at a relatively high level to mid-1950 (BW—Jul. 24'48,p28), will underwrite both the market price and the production of all major farm products.

(4) Farmers are so confident and well-heeled that they are under no pressure to sell for cash. They have enough of a backlog to market carefully, get all the money they can out of sales.

• **Spending**—All these factors mean that one of the lushest of current markets will continue. Last year, the farmer earmarked a part of his income for new equipment. He'll do the same this year.

Over and above equipment, the farmer is spending money for other things. In Texas, part of the current farm income, combined with money saved from the war, is going into new homes. In Kansas, farm modernization is roaring along. It's going so fast that the city folk complain that they can't buy such things as deep freezers—the farmers are grabbing all of them.

• **Hard Selling**—Nevertheless, the farmer tends to be a cautious man. It will take a good salesman to pry loose from his savings account any money that he has put aside for a specific purpose. He does have a weakness for equipment that will cut his production costs and save him labor. Other than this, he likes to use his current income for the biggest percentage of his purchases.

And current income is largely determined by crop prospects. That means that the demand picture will be spotty. Thus, every manufacturer should know the area he supplies.

• **Surplus and Shortage**—For example, a drought this year in lower Saskatchewan has created a surplus of big combines there. On the other hand, a good crop outlook has brought a high demand and low supply in other places. Last month, a North Dakota farmer paid $3,000 for a $1,350 combine.

One manufacturer reports that in Iowa farmers are demanding every kind of farm equipment. The reason: A big bumper crop of corn is coming up and they want the tools to make the most of it. Because of the crop, Iowa farmers stand to net about $4 more gross income per acre on corn this year than last, despite lower corn prices.

• **Illinois Drops**—The picture is just the opposite in Illinois. There the farmers will end up with about $20 less gross income per acre on corn than they did last year. The reason for this difference is that Illinois last year had a much better corn crop than Iowa, thus cleaned up on the high prices.

But Illinois isn't so bad off as this might indicate, since the take from grains is only a part of the total national farm income picture. When a northern Illinois farmer was asked if he had changed any of his buying plans due to the drop in grain prices, he replied: "Well, the prices of the things I happen to sell haven't dropped."

• **Iowa Wealth**—Most farmers in Iowa will make up a rich market regardless of what happens. They are planning more and still more purchases of machinery, building materials, automobiles, and household durables—whenever they can get them.

They will buy these things regardless of current income: The money is already set aside for them. Only a severe recession would tend to make them put the money into something else.

• **Oklahoma Weak**—Not every area, of course, is as free-spending. In Oklahoma, there are signs of a slight weakening in the market. The Farmers' Educational and Cooperative Union Stores reported that spending in Oklahoma is down this year nearly 6% from July 10, 1947. That's the first such decline in 10 years.

Other Oklahoma merchants are already noticing a decline in farmer buying. The farmers complain of the pinch of high prices of things that they have to buy. They say that in some parts of the state black markets force them to pay unreasonable prices for farm machinery. This leaves less for other purchases, cuts their profit margin, and makes them hold back on spending.

• **Exception**—Oklahoma is definitely the exception rather than the rule. From the way things look this week, the businessman will be able to sell most farmers nearly anything he can make for a long time to come.

Rail Freight Rates Up Again

ICC has made its three recent temporary freight increases permanent. And it has added another $67.4-million to the nation's freight bill, mainly by revising its list of maximum increases.

Rail freight rates are going up again—$67.4-million a year this time. Most new costs will fall on ores, concentrates, raw metals and products, and coal.

• **New Order**—That's the long and short of the complicated freight rate order the Interstate Commerce Commission put out last week.

The new hike will be over and above three recent temporary increases granted by the ICC. These—which boosted rates about 21.5% over October, 1947, levels—are now made permanent. But in making them stick for good, ICC did some jiggling which accounts for that $67.4-million. Specifically, ICC has:

REVISED THE MAXIMUM PERMISSIBLE INCREASE for certain commodities. This shuffle will cost shippers $65.2-million.

RAISED PROTECTIVE SERVICE CHARGES 15%. (The prior temporary orders had allowed only 10%.) This means $2.2-million.

• **Postwar Rate Picture**—All in all, by making its three temporary orders permanent, and slightly changing them, ICC has put rates 22.6% over the October, 1947, level. For the roads, that means about $1.5-billion a year more revenue.

But there had already been some upward revisions in 1946 and 1947. So, all told, rates are now up around 44% since war's end.

• **Territorial Variations**—As usual, last week's ICC order didn't jump rates uniformly. Here are the increases over the 1947 base by territory:

Within Eastern	30%
Within Southern	25%
Within Zone I of Western	25%
Within other Western	20%
Between Southern and Western; and between Southern and Western on one hand, and Eastern on the other	25%
Between Zone I and the rest of Western	22½%

All these are the same as in the temporary orders with this exception: The increase between Zone I and the rest of Western had been 25% before.

• **New Maximums**—The thing shippers will look at most closely, however, is the overhaul of the "maximums." A maximum is a flat-figure limit to a rate hike. For example:

You are shipping aluminum within

Eastern territory. Before October, 1947, it used to cost you, say, $15 per net ton for a certain haul. Now rates have gone up 30% within Eastern, so theoretically you should pay $19.50. But you don't. The ICC has slapped a maximum of $3.20 a net ton on the rate increase for aluminum. And your bill therefore is only $18.20. In short, a maximum is a ceiling beyond which rate increases can't go.

• **Higher Ceilings**—Listed below are the amounts by which principal maximums have been raised over prior levels (in cents per net ton):

Aluminum angles, bars, etc.	$0.40
Aluminum pigs	.40
Chrome and manganese ores and concentrates	.90
Cinders, slate, and shale	.87
Copper, brass, bronze articles	.40
Dolomite, roasted	.37
Granite paving blocks	.10
Iron and steel articles, axles, bars, etc.	.40
Iron and steel articles, mfgd.	.40
Iron and steel scrap	.40
Iron and steel wire	.40
Iron ore other than Upper Lake Port rates	.05
Lead and zinc, anodes, etc.	.40
Limestone (in closed equipment)	.87
Marble, granite (in closed cars)	.87
Nails, spikes, etc.	.40
Perlite rock	.87
Pig iron	.40
Rails and railway track material	.40
Railway car axles	.40
Tank and tank materials	.40
Tin or terne plate scrap	.40
Trucks	.40
Vermiculite, crude	.87

• **Lower Ceilings**—Here are some of the principal decreases in maximums:

Brick and tile	$0.60
Cement	.40
Cement building blocks	.60
Cinders	.03
Clay, in open tops	.90
Conduit	.60
Dolomite, unroasted, in open tops	.03
Fullers earth	.03
Furnace slag	.03
Iron ore tailings	.03
Lime	.80
Oranges, grapefruit, lemons, etc.	.40
Oyster shells	.03
Phosphate rock, phosphatic sand and clay	.20
Plaster	.80
Pumice	.03
Sand, molding	.06
Other sand or gravel:	
In open cars	.03
In closed cars	.06
Stone, marble or granite, in open cars	.03
Sugar	1.60
Woodpulp	1.20

Engineer, way up front of a diesel-electric locomotive, talks via radio with . . .

Freight train conductor in caboose, or . . .

Way-station operator along the line

Four-Way Radio Makes a Faster Erie

Four-way radio communication is easing the hitches, snapping up service on 315 miles of the Erie R. R., from Marion, Ohio, to Salamanca, N. Y. It's one more example of the growing use of radio in railroading.

• **Demonstration**—Last week, Erie's 90-car train NE-98 pulled out of Marion. Aboard were a group of observer guests. They noted how four-way radio connected (1) front and rear ends of the train; (2) both ends with way stations; (3) the NE-98 with other trains within radio range; and (4) one way station with another. The train also connected with Cleveland—via radio and telephone.

Here's just one job the installation did on that demonstration trip: When the train was ready to move out of Marion, brakes on the company's official car attached to the caboose were improperly released. Over the radio, the conductor in the caboose told the engineer up front to adjust the pressure. It took several radio calls, but only a few minutes, to fix the brakes. Without the radio, it would have taken an hour or more to make the contacts from one end of the train to the other.

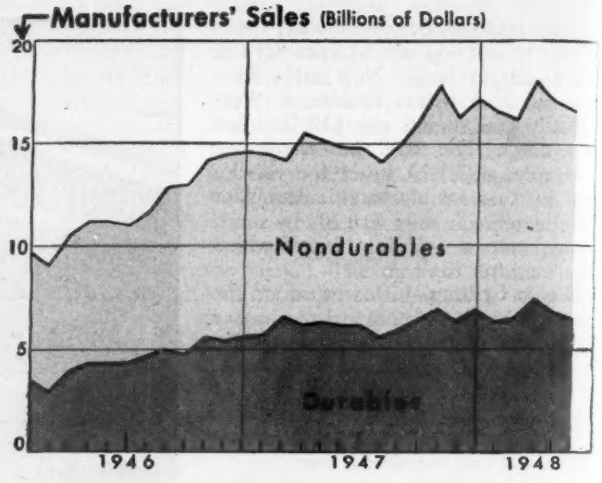
• **Terminal Shift**—Another Erie announcement brought good news to Cleveland travelers last week. Beginning March or April, 1949, diesel-equipped Erie passenger trains will come into the Cleveland Union Terminal—bypassing the local Erie station, and cutting a half mile off the trip.

Finished Goods Inventories Rise

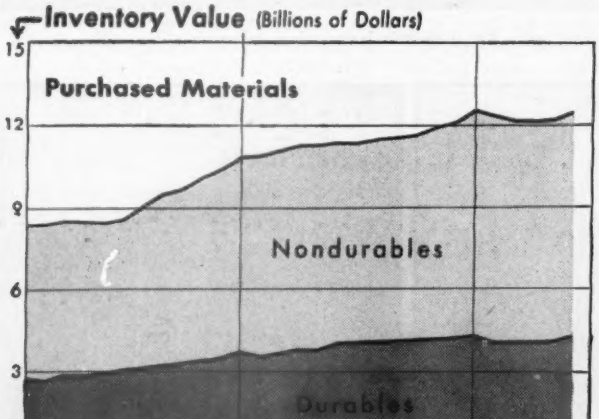
The statistical pictures shown in these charts add up to a dramatic industrial fact: Many hard-to-get items can be bought right out of the warehouse now—or with only a short waiting period after you place an order. The announcement (lower right) in a General Electric Co. house organ for distributors sums up the whole story.

Behind this situation lies a leveling off of manufacturers' sales and during-production inventories—but a sharp 1948 rise in finished-goods inventories, particularly nondurables.

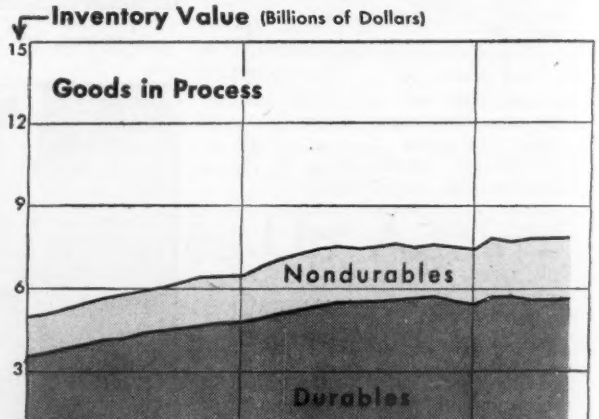
While finished goods inventories (in dollars) are up about 100% from 1938-40 levels, so are prices. And manufacturers' sales are up 200%.



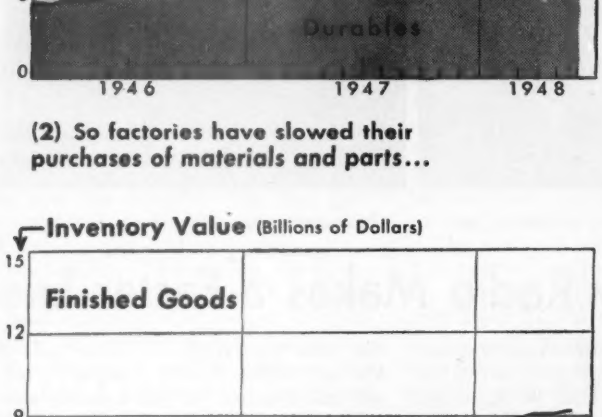
(1) Value of manufacturers' sales has flattened out this year...



(2) So factories have slowed their purchases of materials and parts...

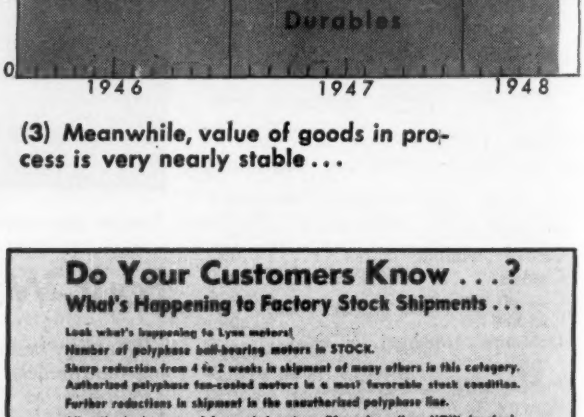


(3) Meanwhile, value of goods in process is very nearly stable...



(4) But manufacturers now are piling up stocks of finished products...

Source: Dept. of Commerce



Do Your Customers Know . . . ?

What's Happening to Factory Stock Shipments . . .

Look what's happening to Lynn motors!

Number of polyphase ball-bearing motors in STOCK.

Sharp reduction from 4 to 2 weeks in shipment of many others in this category.

Authorized polyphase fan-cooled motors in a most favorable stock condition.

Further reductions in shipment in the unauthorized polyphase line.

All authorized open and fan-cooled motors, 20 cycle rating, NOW in stock.

Single-phase motors in excellent stock condition both in factory and the districts.

Shipment on any authorized single-phase or polyphase motors NO MORE THAN 4 WEEKS.

D-C Motors shipment reduced! Many authorized d-c motors in stock. No shipment more than 10 weeks.

Further reductions in control.

CR9502 solenoids reduced from 14 to 7 weeks.

CR4422 and CR 4426 magnetic crane crane control, standard open type, from 35 to 20 weeks.

CR4409 crane protective panel, open type, from 25 to 20 weeks.

CR3144 resistors reduced from 21 to 10 weeks.

CR2530, CR9107, CR9110, and CR9119 rheostats reduced from 18 to 10 weeks.

CR7055 and CR7056 starters from 40 to 32 weeks.

CR7000 limitamp starters from 28 to 20 weeks.

(5) So that many companies find they can offer much quicker deliveries.

© BUSINESS WEEK

Aluminum Output Up, But—

Demand still tops peak postwar production. This year's civilian wants are 900,000 tons—against estimated 790,000-ton production. Main reason for pinch: shortage of electric power.

Metal-short manufacturers shouldn't count on getting much aluminum to stretch their supplies—not right now, anyway. Smelting of new aluminum is on the rise. But it won't catch up with demand this year, and probably not for some time to come.

• **Postwar High**—Figures released last week show that production of primary aluminum reached more than 55,000 tons in May. That's a postwar high. (Primary aluminum is smelted from ore, as distinguished from secondary aluminum, which is remelted from scrap.) In fact, since February, new aluminum output has climbed each month, in spite of earlier pessimistic predictions (BW—May1'48,p34). If average monthly production for all of 1948 keeps up to the level of the first five months, the year's output will be about 610,000 tons. Last year's production came to about 570,000 tons. (Remelt should bring total 1948 domestic production to 790,000 tons.)

• **Demand Up, Too**—Increased demand is the rub. The aluminum industry estimates civilians will want about 900,000 tons this year. Toward the end of the year the 70-group Air Force building program will begin to cut into civilian stocks. That program is expected to take 30,000 tons or more of the light metal.

• **Reasons**—How do you account for other postwar demand for aluminum? There are two main reasons:

(1) Aluminum is light, thus goes further than many other metals.

(2) More important, maybe, aluminum is cheaper now than it was before the war; prices of other metals have risen. It's true that a few weeks ago, following a wage hike in the industry, aluminum went up 1¢ a lb. That was its first price increase in 11 years. Even so, the price of primary aluminum is 20% below 1939, while the average price level of all metals and metal products is now about 70% above 1939.

• **Uses**—So it's no wonder that new uses have been developed, and prewar uses have been increased. Today, aluminum is going into windows, screens, roofing, blinds, and nails. Insulated aluminum wire and conductors are becoming popular. More aluminum foil is being wrapped around packaged food products. Auto makers find that putting in aluminum wherever economically possible saves them steel with which to build a few more cars. For much the same reasons, the metal is being used in railroad cars—about 10,000 tons last year. It's being tried out in petroleum pipelines (BW—May15'48,p92).

• **Some Help**—Scrap from war material has helped fill the gap between postwar demand and postwar production. But that source is gradually drying up. Last year only about 200,000 tons of scrap from all sources were remelted, compared with about 275,000 in 1946. For the first three months of this year, scrap remelting is running at an annual rate of about 180,000 tons.

Increased exports from Canada have partly taken the place of war scrap. Last year Canada exported 16,000 tons of new aluminum to the U. S. By the end of May this year, it had already exported about 30,000 tons.

• **The Hitch**—The major obstacle to increasing aluminum production rapidly is its dependence on power supply. It takes a lot of electricity to make aluminum—10 kwh. or more for every pound. And power is tight in the U. S. wherever aluminum is made.

If the industry had enough electric power, it could put back to work war plants now closed down. That would increase annual capacity by about 80,000 tons.

Atoms to Burn

Atomic power may be as abundant as coal, and cheaper, says commission. Latest report cites new fields for business.

One of these days, atomic energy may be just as available for power as coal is today—and cost less, from the fuel standpoint.

That's the latest word from the Atomic Energy Commission. Carefully hedged, it turned up last week in AEC's semiannual report.

• **Optimistic—With Ifs**—It's the most optimistic view that official sources have allowed themselves yet. It comes somewhere near private estimates that the ultimate cost of atom power would be between hydro and steam. And the fact that it comes from the commission's general advisory committee gives it even more weight. The committee has been notably pessimistic on atom power possibilities.

Here are AEC's hedging "ifs":

(1) If the cost of uranium doesn't rise sharply because of forced resort to lower grades; and

(2) If the theoretical possibilities of "breeding" atomic fuel can be realized in practical engineering.

That second proviso means a lot of work. It means building atomic reactors that are highly efficient. Such reactors consume fissionable materials, but at the same time can produce an equal or greater amount of new fissionable material—by transmutation of nonfissionable uranium or of thorium.

Take away these favorable assumptions, and you have a different picture. Then atomic power could compete with coal power only when transportation cost of coal is a determining factor.

• **No Date**—When will the day of cheap, abundant atom power come? The committee is still pretty cautious on this point. It says that two reactors to produce token amounts of electric power should be completed within the next two or three years.

One of these is the natural-uranium pile at Brookhaven Laboratory on Long Island, due for completion early next year. This pile is air-cooled; and the heat picked up from the pile can be used as a power source. It's so small an amount, however, that it isn't even enough to run the blowers that drive the air-cooling system.

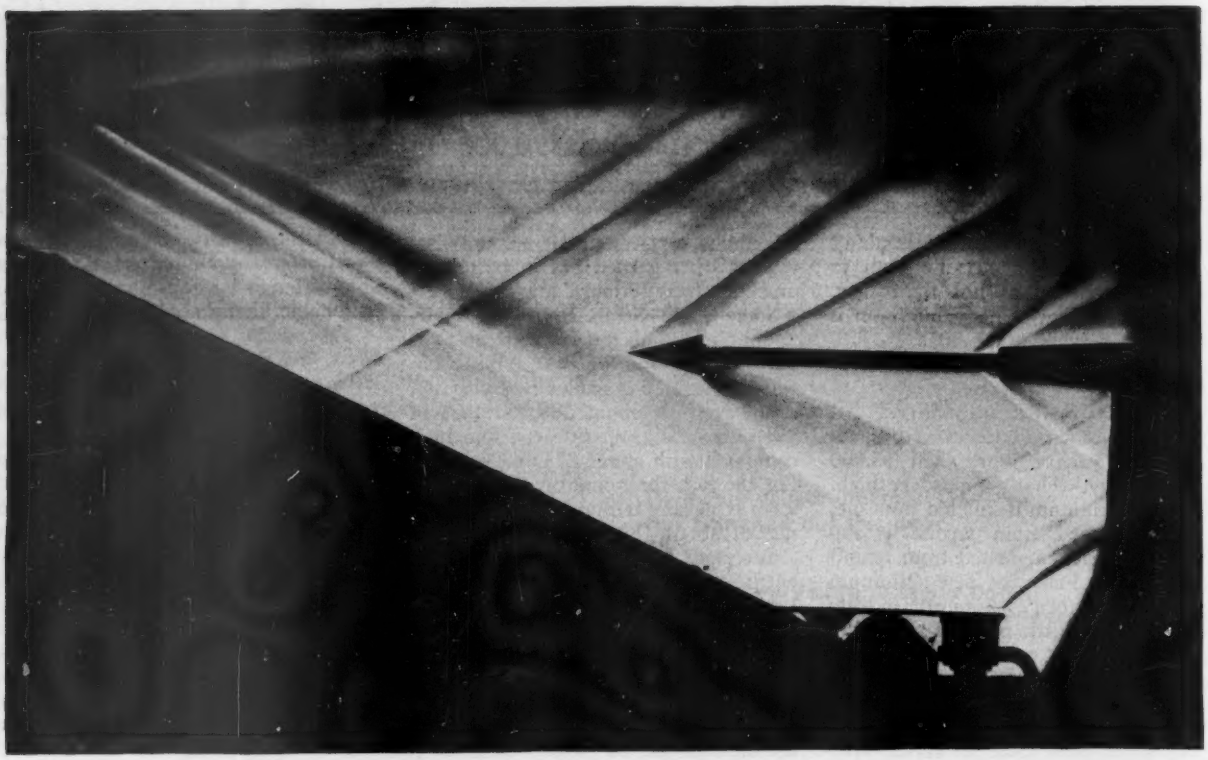
The other is a reactor of advanced design at the Argonne Laboratory in Chicago. This will be a fast-neutron pile using enriched fuel and cooled by liquid metal. It will run at a high temperature and will produce power in something approaching commercial quantities, though hardly at commercial costs. Construction of this reactor was formally approved last month.

• **A Decade or Two**—By building on experience with these two units and their successors, the advisory committee says, "fairly practical reactors that might be useful for special purposes" should be available within ten years.

In about 20 years, if all goes according to schedule, nuclear fuel might replace a "considerable portion of the present power supply of the world," the committee thinks.

• **Tips to Business**—Businessmen may find some tips in the current AEC report. It delves thoroughly into work now being done with radioactive isotopes, by the commission and outside investigators. And it makes a big point of the chances for profitable business in this work—in sales of instruments to researchers, in design and maintenance service for hot laboratories, and in preparing radio-tagged compounds.

Two firms have already broken into this field—Tracerlab, of Boston (BW—May22'48,p52), and Abbott Laboratories, Chicago. Two more are expected to go into it momentarily, and a fifth company is dickering.



1 A key to research on gas turbine aircraft engines is study of shock waves, which are created by passage of objects through air at supersonic speeds. In this dramatic photograph, speed of air passing around arrow in wind tunnel was nearly 1,500 m.p.h.

Packard Reveals It's in Supersonic Race

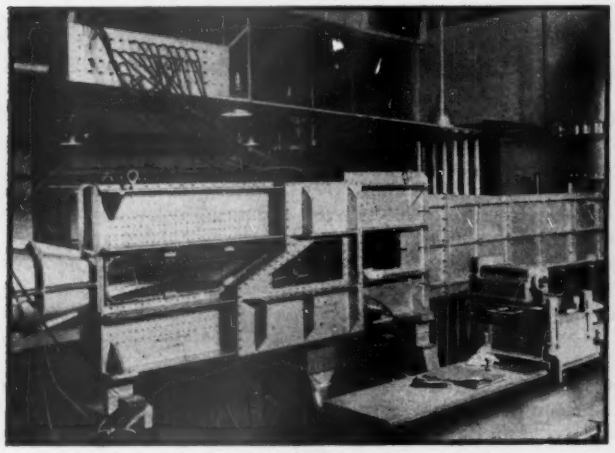
Under a project sponsored by Air Materiel Command, motor car company works at developing gas turbine for aircraft.

Working on gas turbine aircraft engines for the armed forces has become a major job for several of the nation's biggest manufacturers. This week another big name revealed that it is in the show, too. Packard Motor Car Co. took the wraps off its new plant near Toledo.

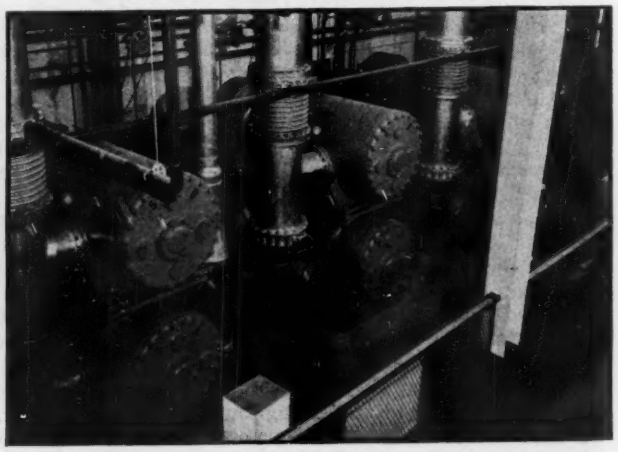
Under a project sponsored by the Air Materiel Command of the U. S. Air Force, Packard is working on gas turbine power plants and guided missiles.

Packard started this project in 1945. The results of the work still fall into the "censored" category. But George T. Christopher, Packard president, says that "rapid progress" has been made. Some idea of the scope of the work can be had from the various laboratories at the new plant: Separate ones are provided for research into electronics, burners, fuel flow, stress, turbines, wheel strength, air flow, metallurgy.

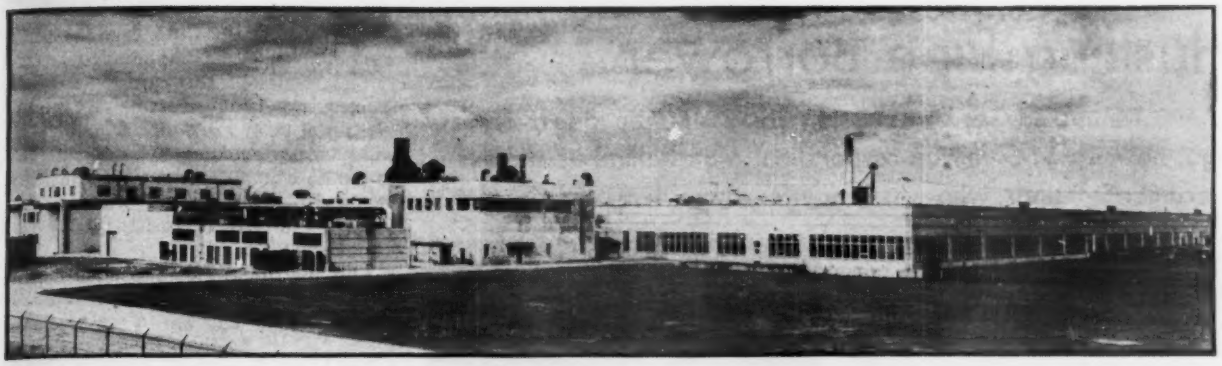
Heading the project for Packard is Arthur Nutt, director of the company's aircraft engineering division.



2 Shock waves are photographed by shadow method through 1-in. glass panels of this wind tunnel by camera at right

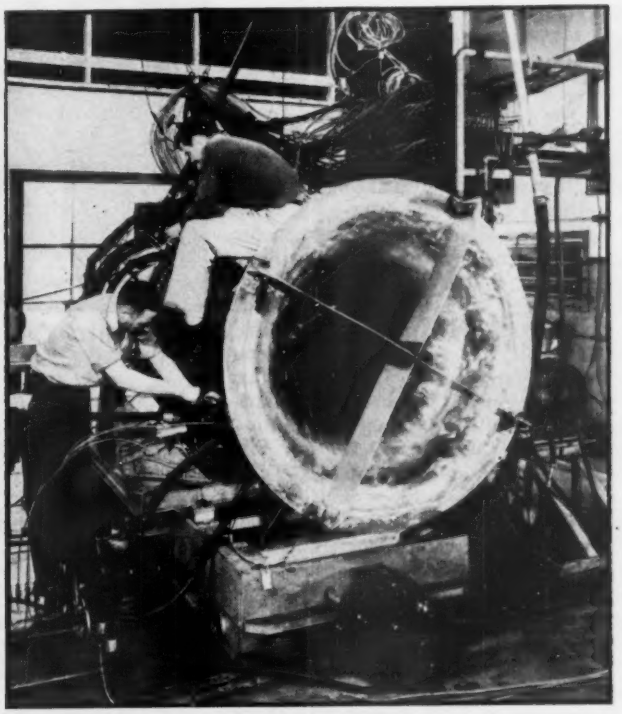


3 Terrific wind velocities are generated by 10 vacuum pumps like these, which handle 115,000 cu. ft. of air per min.



4 New $10-million plant on north edge of Toledo houses facilities for Packard gas turbine work. George T. Christopher, company president, says that they are "unequalled by any private company." Plant covers 79 acres, employs about 550 technicians

5 Every component part must be carefully studied. Turbine blades are examined for vibration under stroboscopic lights



6 Assembled turbine is installed on a thrust-measuring test stand. Maze of connections is needed to measure performance

7 Performance data of turbine under test show upon these banks of meters and gages. Frequently there are so many measurements to be made that instrument boards are photographed to record them. Some 270 separate test readings can be made at once

Hustling Pipe Borrower

Tennessee Gas Transmission Co. was just an idea five years ago, now it's $147-million corporation. Man behind its success is Gardiner Symonds, who was ready for pipe when others weren't.

Tennessee Gas Transmission Co. has proved that there are still business frontiers left in America. Five years ago, it was nothing but a scrap of paper and an idea. Today it is an extremely fast-growing company: It has assets of $147-million and a brilliant future.

• **Gaseous Market**—This growth sprang out of The Chicago Corp., owner of a large gas production area near Corpus Christi, Tex. In 1943, the company found that it had millions of dollars worth of gas and no place to sell it. Gas was practically worthless in Texas, but the war demands for fuel had made it as precious as platinum in the Appalachian area. There was one big hitch—getting a connecting link.

Time was all-important. Even in the fact of shortages of materials and manpower, the link had to be put in fast. So the men with the gas bought out uncompleted route surveys, scrambled for permits, got one from the Federal Power Commission to build a pipeline 1,265 mi. long. They finished this tremendous job in less than 11 months—a record. By October, 1944, the first gas flowed through the system.

• **Drive Wheel**—Most responsible for the success of the job was Gardiner Symonds, 45-year-old vice-president of The Chicago Corp. A man of tremendous energy, Symonds has kept T.G.T. from having a moment of peaceful operating life. Scarcely had he pushed through the first pipeline than he set out to build a second line parallel to it, already has it 75% completed. Work had barely started on it when Symonds applied for a permit to build a third line. It is still pending before the Federal Power Commission.

Within an extremely short time, this spirit of hustle-and-bustle has pushed the daily capacity of Tennessee Gas through its new pipeline to a present 410-million cu. ft. By the end of this year, completion of the pipeline now abuilding will bring capacity to around 600-million cu. ft. And, if and when it gets its third proposed line built, Tennessee Gas's daily throughput will reach well over 1-billion cu. ft. a day.

• **Marketing**—The company markets all this gas through public utilities, who resell it. FPC must first approve all contracts and customers.

Most Tennessee Gas is sold in the Appalachian area. Its two biggest customers are United Fuel Gas Co., Charleston, W. Va., and Hope Natural Gas Co., Clarksburg, W. Va.

ENERGETIC Gardiner Symonds has a second line abuilding, another planned

• **"Borrowing"**—The biggest problem since the end of wartime priorities has been getting the pipe for the second pipeline. Backlogs of orders in pipe mills run far into 1953.

Symonds took this hurdle as easily as he had taken the other—by running around it. Instead of waiting for his orders for new pipe, he "borrows" what he needs as he goes along.

His first big loan of pipe (56,000 tons) came from Columbia Gas & Electric Corp. in 1946. The loan helped both companies: It assured deliveries of gas to Columbia from Tennessee Gas.

Between June, 1947, and March, 1948, Symonds "borrowed" 32,500 tons of pipe from Texas Gas Transmission Co. Late last spring, the time came for Texas Gas to use the pipe, so Tennessee "repaid" 18,500 tons of the loan with pipe which it had gradually collected from its orders with the mills. The rest will be delivered by September.

• **Trans-Arabian Deal**—But Symonds' borrowing didn't really attract attention until recently. Due to the Arab-Israeli war, the U. S. Dept. of Commerce cancelled the export licenses of Trans-Arabian Pipe Line Co. (BW—Jun.26'48, p117). Symonds knew that Trans-Arabian had a lot of steel pipe lying around the docks at Long Beach, Calif. and steel pipe is the stumbling block in all pipeline construction today.

Symonds flew out to San Francisco to talk to Burt Hull, president of Trans-Arabian. Within two days a deal was completed. On the third day, the pipe was being loaded for shipment to Texas.

The results of this deal have been spectacular. Tennessee will save many months of delay in its pipe schedule. It will increase the company's gas capacity to the East by 30% next winter instead of the following winter. And in the process, the deal will make money for Tennessee Gas.

• **The Big Inch**—Symonds first began grabbing at opportunities for Tennessee Gas right after the war. One of these sallies paid off handsomely for a while—but the government turned out to be the big winner. The Big Inch oil lines lay idle. Their wartime job finished, the lines had been put up for sale by the War Assets Administration. But when the highest bid came only to some $75-million, WAA refused it.

Promptly Symonds went to WAA with an offer to lease the lines until it could sell them for the price it wanted. WAA agreed, and Tennessee Gas astounded the industry by cleaning the oil lines and running gas through six days after the agreement was signed.

Tennessee Gas operated these lines for five months, netting its stockholders $895,000 profit. Then WAA put the lines up for sale again. Tennessee Gas bid a whopping $123.7-million, was sure it would get them. But Texas Eastern Transmission Corp. won with a bid of $143-million—nearly twice as much as had been offered in the first sale.

Tennessee Gas feels that it proved that the Big Inch lines could be used for gas—and thus made them far more profitable to the government.

Westinghouse Buys Baldwin Stock

Westinghouse Electric Corp. last week bought up 500,000 shares of the common stock of Baldwin Locomotive Works, Eddystone, Pa.—giving Westinghouse a 22% interest in Baldwin's common. The stock, authorized but not previously issued, has a par value of $13. Westinghouse paid $15.11.

• **Operating Control**—Thus, by spending about $7.5-million, Westinghouse has gained what looks like operating control of the $85-million locomotive company. Marvin W. Smith, Westinghouse's chief engineering officer, is now executive vice-president of Baldwin.

• **Time for a Change?**—Up to now, Westinghouse has been a supplier of electrical equipment for Baldwin's diesel and other electric locomotives. Some observers think that Westinghouse is out to redesign the Baldwin diesel—which faces stiff competition from General Motors' Electro-Motive Division and the American Locomotive-General Electric team.

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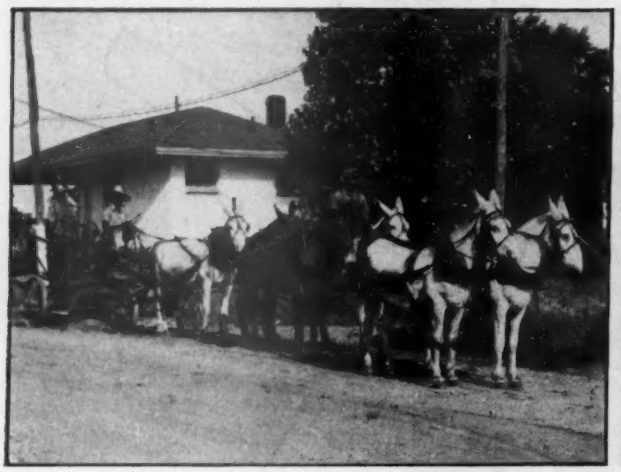


MULES furnished power for scrapers, while . . .

STEAM SHOVELS loaded iron-tired wagons. But the . . .

TRACTOR, gasoline-powered, started trend, which led to . . .

TRACTOR-SCRAPER combinations riding on rubber tires

New Machines Mean More Roads

Construction-machinery makers promote bigger and more powerful units to help ease America's transportation bottleneck.

The men who make construction equipment are mounting a new attack on roadbuilding costs. Their weapons: highly mechanized, high-capacity machines ranging from portable "road-mixing" plants to huge tractor-scraper combinations that move tons of dirt at the flick of a finger. Their aim: to move a maximum amount of material in a minimum of time with a minimum of manual labor.

• **Impact**—Last week, as the huge machines rumbled toward their home plants from the Road Show in Chicago, businessmen speculated on the impact that they would have on construction costs. They generally agreed that when enough of the machines get on the job, direct labor costs will probably come down.

But even if the machines don't cut labor costs, they are almost sure to speed up construction, help both the U. S. and South America get more miles of badly needed highways fast (BW—Jul.31'48,p20).

• **King-Size**—So the Road Show—the first since 1940—had plenty of industrial significance. The huge machines mean more roads, more dams, faster plant construction. The show was "king-size" all the way. It was six times larger than the 1940 exhibit. The varicolored products of 327 manufacturers took up 30 acres of space.

Many of the big machines were demonstrated. Over 100,000 visitors from all over the world took the day-long walk through the exhibits.

They saw plenty—but couldn't buy much. Reason: Equipment like tractors, cranes, and shovels is on an 18-month to three-year delivery basis. Other equipment is also hard to get: Only small units like compressors and various tools are available for immediate shipment.

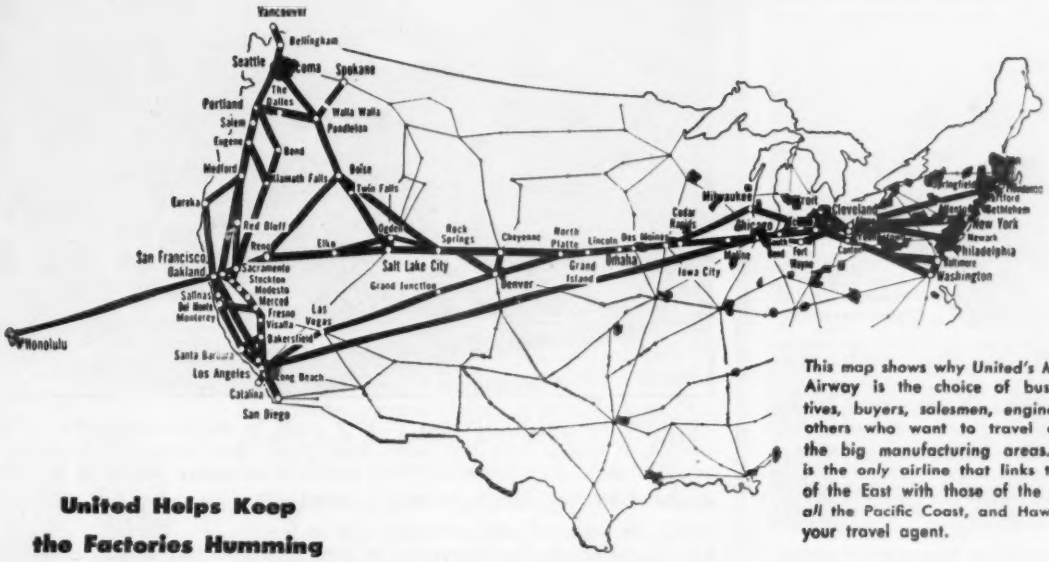
• **Study Sessions**—The nine-day show was put on by the American Road Builders Assn. Its president is J. T. Callaway (cover), its engineer-director is Charles M. Upham (picture, page 32). The A.R.B.A. held technical sessions to discuss highway construction programs, new techniques, and problems of manpower and education.

The Associated Equipment Distributors (made up of 1,000 equipment sell-

This is where the nation manufactures

Over 65% of the people who work at manufacturing are employed in these counties—the major workshops of the nation.

United is the route that goes there



This map shows why United's Main Line Airway is the choice of busy executives, buyers, salesmen, engineers and others who want to travel *direct* to the big manufacturing areas. United is the *only* airline that links the cities of the East with those of the Midwest, *all* the Pacific Coast, and Hawaii. See your travel agent.

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Modernize your distribution system! United Air Freight can make your shipping more efficient. It's the *fast, frequent, direct* service to the nation's industrial areas—for Air Cargo as well as passengers.

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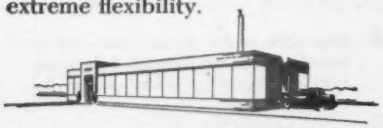
How to Heat the In-Between Building

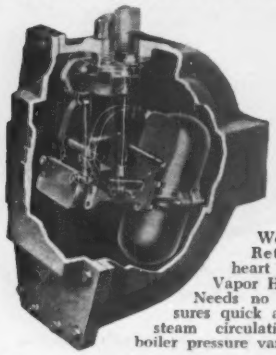
Here is ideal heating for the in-between building—the industrial plant, the 1 and 2-story business building, the very large residence, the warehouse and many other types of buildings. Here too is ideal heating for the building that is sometimes left unoccupied.

The Webster Type "R" System is vapor heating at its best because of its quick response to changes in temperature, its fast heating-up, extreme flexibility.



Typical of the in-between building best heated by Webster Type "R" Vapor System.

The Webster Type "R" System is used with coal, gas or oil-fired boilers...manual or automatic. Can be used with any type radiation—convectors, cast-iron radiators, unit heaters and indirect heating surface.



Webster Boiler Return Trap, heart of Webster Vapor Heating . . . Needs no motor. Assures quick and positive steam circulation despite boiler pressure variation.

There is only one limitation. Water must return to the boiler by gravity. The Webster Boiler Return Trap—heart of the Type "R" System—is automatic. Operates without power consumption.

Vapor heating has its place in modern building—an important place, too. Check on its applicability to your problem when deciding on the heating for the in-between building.

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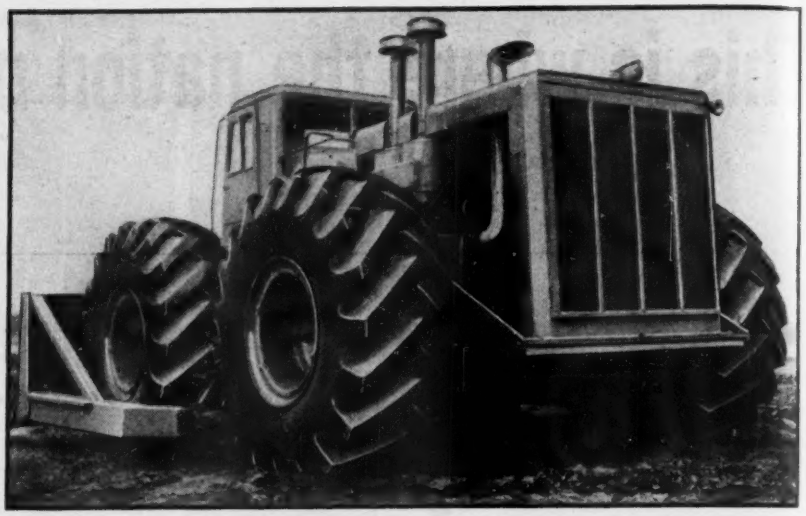
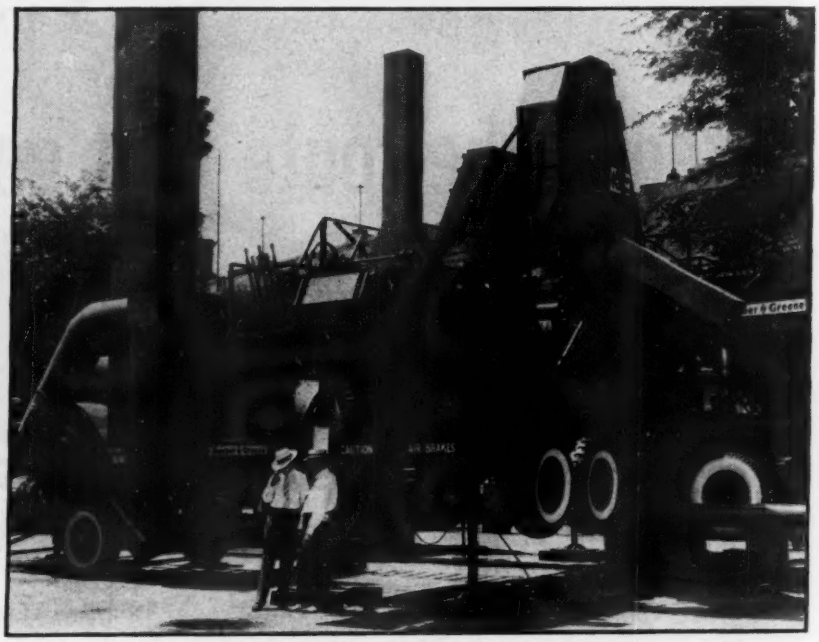


WORLD'S LARGEST BULLDOZER, made by R. G. LeTourneau, Inc., weighs 93,000 lb., has a 750-hp. engine (butane-propane fired), rides on 7-ft.-high tires. This machine scrapes out a road, prepares the way for such machines as this . . .



MOBILE ASPHALT MIXING PLANT made by Barber-Greene. For portability, the machine is broken down into units—stone grader, dust collector and cleaner, conveyors, vibrators and screens, and mixer. Each part rides on rubber wheels. At the job, the parts are joined together, and the machine is loaded with stone and asphalt

ers and manufacturers cooperated in the mammoth program under the leadership of president A. F. Garlinghouse (picture, page 32).

• **Conclusions**—Their conclusions were:

(1) Our highway systems are undersized for the big automotive and truck traffic they now face;

(2) The war put us years behind in maintenance and new construction, so the "highway holiday" means that we have to send lots of good dollars after bad payments;

(3) Adequate highway expansion is going to take lots of time—and money;

(4) Mechanization of highway equipment over the years has kept costs down. For example: According to the A.R.B.A., in 1924 earthmoving costs averaged 42¢ a cu. yd. In 1941, those costs had dropped to 22¢ a yd. Today they are about 38¢ and still lower than 1924. Labor costs, on the other hand, went from 36¢ an hr., in 1924 to 49¢ in 1941. Today they average $1. This points up the cost-cutting value of adequate mechanization. Without large machines and automatic controls, road-

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SHEAFFER'S SAFEGUARD

building would be practically impossible today from the cost angle.

• **Cutting Costs**—How are those costs kept down?

Visitors to the show found out quickly. Huge, two-wheel tractors hauling giant two-wheel scrapers pick up tons of dirt as they are pulled along. Or monstrous bulldozers, fingertip-controlled, shove loose earth aside.

Remote-controlled shovels and cranes scoop up loose earth, load it into "buggies" 10 to 20 times the size of the mule-drawn dirt wagons of 30 years ago. These buggies are mounted on oversize rubber tires. They can scoot along highways at good speeds; get back to the job fast. (One such dump truck shown had a 30-cu.-yd. capacity. Its job is more that of building dams and doing earthwork than roadbuilding.)

• **Mixing Plants**—Complete asphalt-mixing plants (picture, page 30) take loads

ENGINEER-DIRECTOR of the American Road Builders Assn.: Charles M. Upham

PRESIDENT of Associated Equipment Distributors: A. F. Garlinghouse

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...for powerful, lighter, safer motors

Providing power for the world's largest lift trucks is a tough job for an electric motor. The constant starting, stopping, reversing and overloading often lead to overheating—resulting in burned-out insulations—a common cause of motor failure. That's why the armatures and field coils used in the motors for these powerful hydraulic lifts are insulated with Fiberglas impregnated with a silicone varnish. The high heat resistance of this combination enables the manufacturer to reduce both the weight and size of the electric motor and still maintain a safety factor in excess of that obtained from other insulations.

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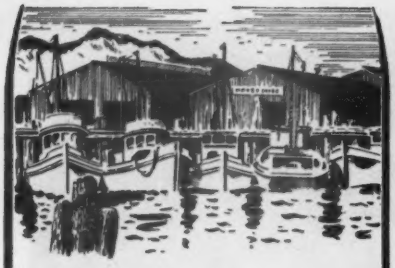

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We are both proud and careful of our more-than-50-year record as gearmakers to western industry.

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GEAR PRODUCTS

of stone, automatically separate the stone according to size, clean dust out of it, feed preset quantities of each size into a mixing chamber, add asphalt. Result: an asphalt road, ready to lay.

Concrete roadmakers, self-contained, do the same kind of job. After the hopper is loaded, the operator simply pushes one button. This puts the machine through the complete concrete-making cycle, delivers concrete by the bucketful to a delivery hopper that travels along a boom. The machine, as it travels down the cleared stretch, leaves behind it a complete ribbon of concrete.

Other time- and money-savers shown included machines that tamp down the earth as they pass over, using vibration as the compacting force. There are machines that whirl cutters in a huge circle, and produce 6-in.-wide trenches 4 ft. deep as they move along; and a machine that makes gutters and curbs.

• **Over-All Trends**—Certain across-the-board trends showed up clearly. One of these is the wider use of rubber tires. This trend has been forming steadily over the past 10 years, but the 1948 exhibits showed a big lift in acceptance. Even cranes are now rubber-mounted; so are concrete and asphalt mixers, dump trucks, compactors, graders.

Another trend is the growth in the number of multipurpose machines. Graders, for example, can be fitted with bulldozing and scarifying (soil-scratching) accessories, or with compacting rollers. Some can add an elevating conveyor for picking up windrowed material. Other attachments: sweeper brooms and front loaders. Such multipurpose machines are good news for the small contractor or low-budget highway department. Highly specialized machines, aimed at the big-operator market, were also in evidence. The philosophy here is the same as that in the machine-tool business: Use a specially-tooled, single-purpose machine when you have a big, long job to do. Then it can be designed for that job and that job alone.

• **Bigger and Bigger**—Equipment continues to get bigger and bigger. One tractor-bulldozer (picture, page 30) is a 750-hp. unit. Patrol graders in the bigger sizes carry six giant wheels. Haulage units have more capacity.

Such size increases lead inevitably to remote and automatic control systems. Big units need hydraulic steering boosters (even small units are now being fitted with them). In many machines—even small ones like wheelbarrows—electric, hydraulic, or pneumatic power do the "thinking" for the operator, take the "muscle" out of road building. Operators need no longer pull at stubborn levers; all they need do is flip a control rod no longer than a pencil.

• **Three Limitations**—Highway men and contractors at the exhibit looked longingly at the money-saving monsters, but at the same time talked about the three main factors that are going to limit highway development in the near future, no matter how big the appropriations may be: (1) lack of adequate engineering personnel and skills; (2) tight labor supply; (3) shortages in equipment, caused by slow production and abnormal demands for replacement machines.

TWO-TONE PLATING

Automobile hood ornaments are going to have a two-tone glitter. That's the word from Detroit's Continental Die Casting Corp. The company, a division of F. L. Jacobs Co., has found a way to mass-produce gold- and chrome-plating on a single piece of die-cast metal.

Ornaments made with the process are already being turned out in quantity at Continental's two plants. Although the hood sparkler looks very much like a three-piece job, it is actually a one-piece zinc-alloy die casting. About one-fourth of the top surface is gold-plated, the rest is covered with chrome.

To do the plating, Continental first gives the casting a copper bath to harden it, then a nickel bath to protect it against corrosion. A masking material (copper-nickel metal covered by a plastic coating) is then bridged across the area to be gold-plated. Next, the casting is chrome-plated. The mask is then removed and the casting goes to a gold-plating bath. As a final step, the gold-plated area is sprayed with a coating of enamel and baked for an hour.

Continental doesn't expect the process to be confined to the automotive industry; it thinks the method can be used to make similar decorative products for other uses.

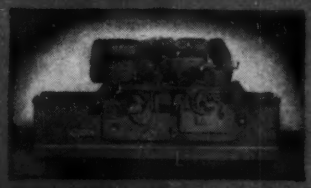
HOW TO CUT COSTS

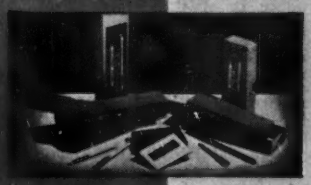
If you're up against the problems of cutting manufacturing costs and stepping up output, General Electric Co. may be able to help you.

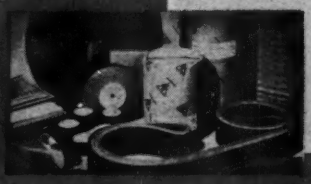
As part of its "More Power to America" program, G.E. has put together a package called "Materials Handling in Receiving, Warehousing, and Shipping." The package consists of a 16-mm. film in color and a 96-page application manual. The film is available to manufacturers; the book costs $1 a copy. You can get it from G.E.'s Schenectady office.

The book, heavily illustrated, contains chapters on: materials handling equipment; integrated systems; applications; skids, pallets, and containers; how to make a plant survey; engineering data on conveyors, cranes, hoists, trucks, and tractors. It also lists manufacturers of handling equipment.

CUT COSTS with these NORTON PRODUCTS







HERE are the seven major lines of NORTON products that are definitely helping to cut production costs in a wide field of manufacturing. They cover the entire scope of abrasives and grinding, plus the handling of high temperatures. They have behind them skilled laboratory research and many years of manufacturing "know-how." They are all serviced by experienced field engineers.

ABRASIVES

Alundum and Crystolon abrasives for polishing, lapping, tumbling and pressure blasting.

GRINDING WHEELS

Grinding wheels ranging from tiny mounted points to gigantic ten ton pulpstones—wheels for every type of grinding job.

GRINDING AND LAPPING MACHINES

A varied line of machines for production-precision grinding and lapping and for the tool room.

NORBIDE (Norton Boron Carbide)

The hardest material made by man—available as an abrasive; in molded products for extreme resistance to wear; and for metallurgical use.

REFRACTORIES

High temperature refractories for metal melting, heat treating and enameling; for boiler furnaces; for chemical processes.

SHARPENING STONES

Manufactured and natural stones in sizes and shapes to meet every sharpening and production need.

ABRASIVE PAPER AND CLOTH*

Abrasive paper and cloth in sheets, discs, rolls and belts in a variety of coatings for every industrial need and for the home.

*Products of Norton Behr-Manning Division

NORTON COMPANY, WORCESTER 6, MASS.

(Behr-Manning, Troy, N. Y. is a Norton Division)

NORTON

with ELWELL-PARKERS

WHY—Materials handling averages 20% of production costs, adds little to product value. No other field offers such cost-cutting opportunities.

HOW—Through an integrated system of Elwell-Parker Industrial Power Trucks, individually "tailored" to *your* loads and to *your* plant and production needs. Only Elwell-Parker can offer the *greater* engineering knowledge gained from *42 years' service to over 300 industries.*

RESULTS—Faster production, Greater turnover, NEW profits. *Let us send the nearest man.*

SEND FOR BOOKLET

on Scientific Materials Handling; ask for "Industrial Logistics." The Elwell-Parker Electric Company, 4535 St. Clair Ave., Cleveland 14, O.

ELWELL-PARKER
Power Industrial Trucks
Since 1906

THICKNESS TEST: At Heinz plant, a plummet drops from a standard height into a jar of mayonnaise. It penetrates a distance proportional to the consistency of the mix, which can thus be measured.

COLOR TEST tells whether a mix is too dark, too light, or just right. A production-line sample is checked against a whirling color card. Result: Color variation in various batches is minimized.

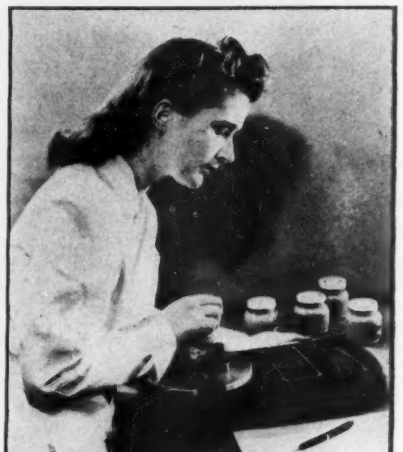
Foods Kept Up to Snuff With Quality Control

When you buy a brand bottle of catchup—or any other packaged food—you want it to taste just like the stuff you bought the last time. If it doesn't look or taste as good, you are likely to switch to another brand.

• **The Problem**—That poses a tough problem to manufacturers. What the problem boils down to is: quality control. It's tough enough if the manufacturer is mass-producing a product from a single plant. If he's turning out the same product from several plants, it's tougher. And if his product is tomato catchup—or pickles, or canned foods of any kind—it's still harder; food is about as variable a raw material as you can think of.

That's why H. J. Heinz, Pittsburgh, has been working with quality standards for years. Heinz started quality control way back in 1897. In 1903, it set up its chemistry department—one room in the "vinegar" building. Today the staff has 100 workers. Their jobs are more complex, too. They do analytical, bacteriological, organoleptic (sight, smell, taste, feel) testing of all products on a regular basis.

• **Quality Men**—Heinz' "quality men" do their job on an hourly basis. For example, at a given hour, an operator whisks several bottles of catchup at random off the line. One sample is opened right away, is tested for consistency, color, smell, flavor. Another waits for 12 hours, then gets similar tests. A third bottle goes to the central Quality Control lab. A fourth is labeled, stored for months or years, and then tested.



TWIST TEST: Does a jar of mustard open easily? Heinz uses a torquemeter to measure the twist of a wrist. Lids can be machine-set—not too tight to open, not too loose to spoil contents

An additional four bottles an hour go to bacteriological testing.

• **Borrowed Techniques**—Many of the physical tests have been adapted from those used in the mechanical field. The recording and control techniques parallel those of such manufacturers. Heinz' basic idea: Measure and control all variables to insure uniform quality of product.

Here's a sidelight on how Heinz rates this job: One of the company's first control chemists, hired on a temporary basis in 1903, was H. N. Riley. Today, he's vice-president and director in charge of manufacturing, as well as of research and quality control.

NEW PRODUCTS

Improved Design Cuts Microfilming Costs

Microfilming of checks and documents is a well-known time-saver and cost-cutter for industry. Bell & Howell Co., Microfilm Division, 7100 McCormick, Chicago 45, says its new machine (Design 190 Microfilm Recorder) adds new economies to the process.

The new machine has several advantages, says B. & H.:

(1) It allows one side only of the 16-mm. film to be exposed at a time, if desired. This doubles the number of possible exposures on the film.

(2) It can record two rows of 8-mm. images of front sides of documents, or record both front and back sides simultaneously.

(3) Reduction ratio is 37 to 1. This reduction is greater than that of conventional machines, according to B. & H.

(4) An automatic document-feeder (picture above) enables one operator to load documents and at the same time operate two or more machines simultaneously.

These four advantages, B. & H. reports, add up to a cut of at least 50% in present filming costs, plus substantial cuts in labor costs.

The machine uses nonperforated 16-mm. film, can fit about 22,000 check-sized images on a standard 100-ft. roll. The automatic feed delivers about 250 documents a minute. (Hand feed runs about 60 a minute.)

The manufacturer has built into the machine automatic control devices. A color rheostat, easily adjusted by the operator, makes possible the filming of colored documents. An alarm system immediately indicates any lamp failure; improper loading of film; a filled receiving spool; or an exhausted film supply. Used film footage is also shown; and the recorder will not operate unless the camera is correctly positioned.

• *Availability: immediate.*

Window Washer's "Floor"

A safety platform that will take window washers or painters out of "harness" is a development of Industrial Products Co., 2808 N. 4th St., Philadelphia 33.

The platform rests on the outside window sill, is held in place by a carbon-steel bar. This bar runs across the width of the window, has its ends against the inside wall. Rubber guards protect wallpaper or paint.

The platform will take an 800-lb. load, has a 34-in.-high guard rail. You can collapse it for storage or to move it from one window to another. The steel bar is telescopic for width adjustment; you can also make changes for varying window-frame thicknesses. The standard size will handle windows up to 4 ft. wide; you can get a model for a 7-ft. width at no extra cost.

• *Availability: one week.*

Letter Slitter

A desk-model letter-opening machine, designed and priced for small businesses, is manufactured by Pitney-Bowes, Inc., Stamford, Conn.

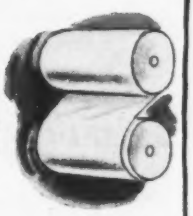
To operate the Model LH Mail Opener, you press down lightly on a lever. A guarded spiral cutting blade trims off a thread-like edge from the envelope;

Industrial Progress with INTERLAKE CHEMICALS

Many industries who serve people everywhere are served by Interlake Chemicals. For example:

PAPER

Interlake Resins for paper laminates

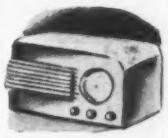


ROOFING

Interlake Coal Tar

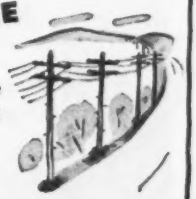
RADIO

Interlake Plastics for cases and parts



TELEPHONE

Interlake Creosote Oil for preserving poles



INTERLAKE CHEMICAL Corporation

• PRODUCTS FROM COAL •

Executive Offices: Cleveland • Branch Offices: Boston • Chicago • Los Angeles • Seattle

Manufacturing Plants: Erie, Penna. • Forest Park, Ill. • Toledo, O. • Chicago, Ill. • Detroit, Mich. Duluth, Minn.

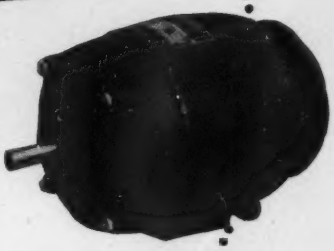
A NAME SYNONYMOUS WITH GOOD MOTOR PERFORMANCE

Lamb Electric

Thorough engineering, exacting manufacture and rigid testing are three of the basic factors responsible for the long, trouble-free operation of Lamb Electric Motors.

This standard of dependability has resulted in the use of Lamb Electric Motors in over four thousand applications in the home, commercial and industrial motor-driven product fields.

THE LAMB ELECTRIC COMPANY
KENT, OHIO



Universal motor used for commercial vacuum cleaners, wheel balancers, air compressors, etc.

Lamb Electric
SPECIAL APPLICATION FRACTIONAL HORSEPOWER MOTORS

Ford Motor Company, Hapeville, Ga. — *Albert Kahn, Architect*

The general acceptance of Michaels building products is the result of our ability to follow implicitly minute details, and faithfully reproduce in metal the most exacting specifications. Then, too, Michaels is well-known for the high quality of its products and dependable service. The partial list at the right will give you an idea of the wide range of Michaels products. Write us for complete information.

MICHAELS PRODUCTS: Bank Screens and Partitions, Welded Bronze Doors, Elevator Doors, Store Fronts, Lettering, Check Desks (standing and wall), Lamp Standards, Marquises, Tablets and Signs, Name Plates, Astragals (adjustable), Stair Railings (cast and wrought), Wrought and Cast Radiator Grilles, Grilles and Wickets, Kick and Push Plates, Push Bars, Cast Thresholds, Extruded Thresholds, MI-CO Parking Meters, Museum Trophy Cases.

THE MICHAELS ART BRONZE COMPANY, 232 Scott Street, Covington, Ky.
Member of the National Association of Ornamental Nonferrous Metals Manufacturers

the mail can be sheared open as fast as you can feed the machine. A self-adjusting guard roller takes mail of practically any size or thickness. There is only the one moving part.

The housing is an aluminum-alloy die casting which mounts a cutting blade and shear plate of hardened steel. The machine is 16¼ x 3¾ x 2¾ in., weighs 7 lb., 14 oz. The housing is tan to blend with desk tops; lever and feed plate are done in satin-finish nickel.

• Availability: immediate.

P. S.

Advertising kits of die-cut paper letters and symbols make it easy for a store owner to set up window signs in a few minutes. The letters come in a variety of shapes and colors. Ru-Jon, Inc., 3101 Mayfield Rd., Cleveland, is the manufacturer.

Projector for 16-mm. color transparencies will blow up your shots to 20 x 30 in. at a distance of 12 ft. This is the second 16-mm. projector to go on the market. The manufacturer, American Masterpieces, Bell, Calif., calls it the Projecto-Master.

Two-legged platform hooks over an automobile wheel, eases the stretches and strains of under-the-hood repairs. Legs are telescopic; the nonslip platform can be raised or lowered. Mech Aid Co., Inc., 129 Washington St., Brookline 46, Mass., call the gadget the Mech Aid.

Tamper-proof photographs or passes can be made with a sensitized printing paper manufactured by I.S.C.I.B. "Barra," Naples, Italy. The picture is reproduced right through the paper and is visible on both sides. A special small machine does the printing. Marinag International, Inc., 202 E. 44th St., New York 17, is the agent for the U. S. and Canada.

The biggest one-time shot in the world, eh, Judson?

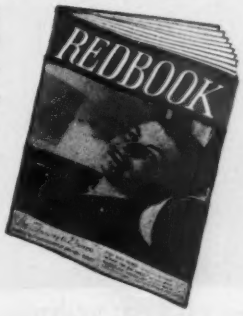
Judson: Why, yes, sir . . . and you can see it for miles!

Chairman: I don't care if you can see it half way 'round the world . . .it happens only once! That kills it as far as I'm concerned.

No one-time shot ever built up the steady demand that makes a business grow.

Judson: But our budget . . .

Chairman: That's just the point! The only advertising we can afford is the kind that works for us month in and month out. We can't sacrifice continuity in order to buy big circulation. Pick out an audience that we can afford . . . make sure that they are potential customers for us . . . then let 'em have it continuously!



Judson: What did you have in mind?

Chairman: Where were you when the REDBOOK man was around? Haven't you heard about nearly two million REDBOOK families? Most of them are young . . . they're still making up their minds as to the brands they like . . . let's make them like our product. They've got SIX BILLION DOLLARS to spend, and we can tell them our story in full pages every month in the year for $52,800. Our budget will like that.

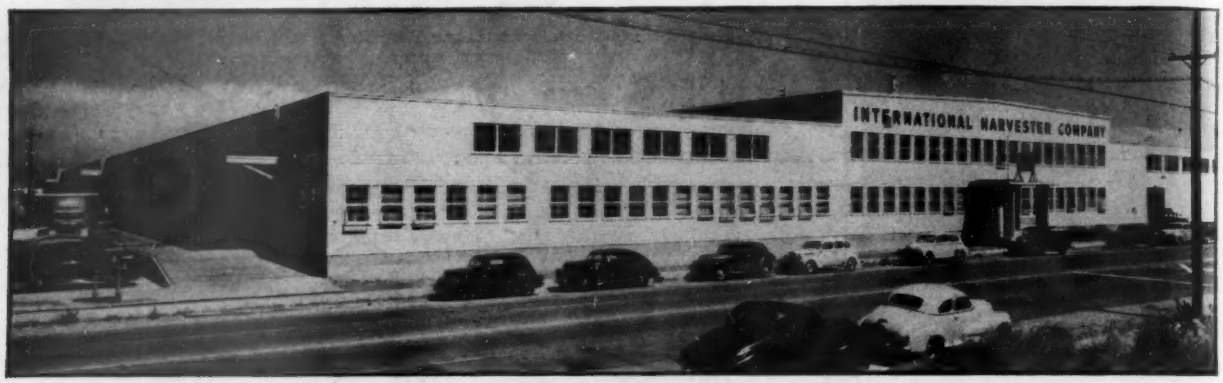
Let's get out of this sand pile and go home and send an order to REDBOOK. It'll be the making of us!

REDBOOK

444 Madison Avenue, New York 22, N. Y.

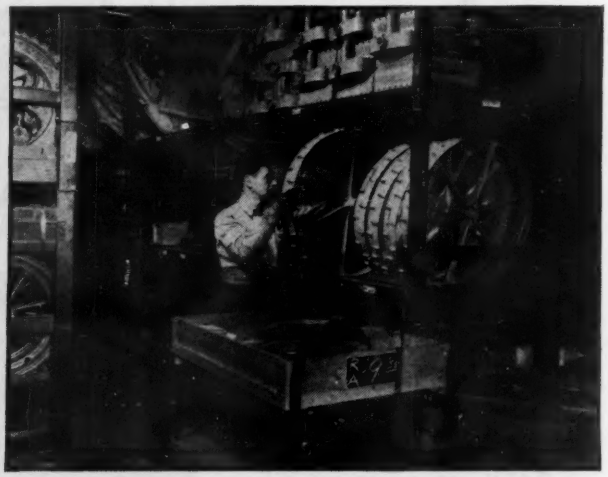
MARKETING

New Parts Depots Do Cheaper, Faster . . .

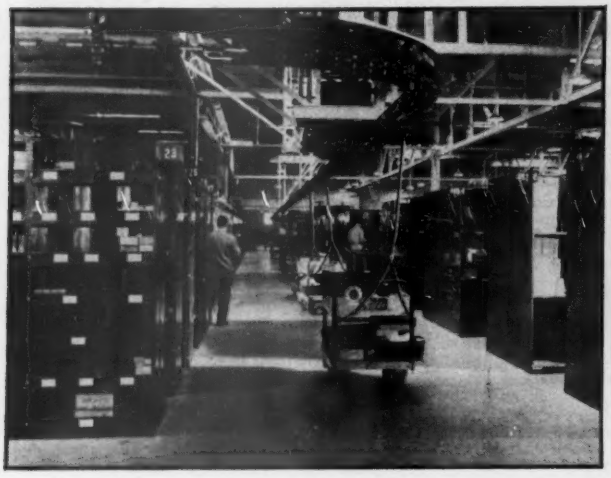


1 WAREHOUSE, opened in Richmond, Calif., this week by International Harvester is the second of 11 new parts depots. The pictures below, from I. H.'s Baltimore installation, show what goes on in these cost-cutting, service-speeding depots

2 SMALL PARTS arrive from factory in palletized bins with hinged sides; there's no need to unpack until order-filling time



3 LARGER PARTS are stowed on shelves. Order-filler loads a truck chalked with time of arrival at the packing section



4 OVERHEAD TOWLINE pulls the loaded trucks through the order-picking area. The truck will stop next at the . . .

5 PACKING STATION. Packages ride belt-driven roller conveyor to strapping machine, thence to shipping dock

. . . Sales Job

International Harvester building string of mechanized warehouses to cut down inventories, speed deliveries.

When you need a spare part—for a threshing machine or a stamping press—you usually need it right now. Machinery makers and users know that delay means holding up harvests, production lines, profits.

That's why International Harvester Co. has been working on that problem—getting the spare part out fast. The company thinks it has the answer: warehouses, just for parts, dotted in strategic spots around the country.

• **Second Link**—This week, the second such depot—in Richmond, Calif., began to ship to dealers. The first one, in Baltimore, Md., was finished last year. When I. H.'s new five-year plan is completed, there'll be 11 parts warehouses.

• **Problems**—Working out the new distribution system wasn't easy. Supplying spare parts is a complicated business. An established manufacturer has to keep on hand stocks of parts for machines he quit making 30 years ago. These parts, and some others for more modern machines, have a slow turnover rate—but they must be carried. This means tying up money in costly inventories.

Toughest of all is the problem of speed in supplying parts to out-of-the-way corners of the country. Replacement service must be fast to keep customers happy.

International Harvester Co. knew all this when it began a survey of its own distribution system over a year ago. The company's goal: to work out some way to get the goods into any dealer's hands within 36 to 48 hours, whether he was in Maine or Oregon.

• **Parts Sales Up**—In digging into its distribution pattern, Harvester experts turned up some facts that surprised them. Over the years, the business of supplying parts had become a big item on the annual income statement. Back in 1917, parts sales didn't amount to much; in that year the company realized almost three times as much revenue from sales of binder twine as from parts.

By 1947, the picture had changed. Parts sales accounted for almost $150-million—roughly 20% of Harvester's total sales of $741,252,000. Motor

It's easy to find the man you want . . .

—with a time-saving RCA Sound System

● Use RCA voice-paging to search one or all areas of the factory, laboratory, warehouse or office . . . direct from your desk or through the sound system operator.

Find and communicate instantly with the person you want. No delay because telephone lines are busy. An RCA Sound System leaves "inside" telephones free for "outside" business calls. You save time in locating executives and other personnel . . . in calling meetings . . . checking on production or shipping . . . issuing instructions or seeking information.

But, that is not all. The broadcasting of music to workers over an RCA Sound System increases productive efficiency. It also builds good will between employees and management. "Music while they work" gives employees a psychological "lift" during "let down" periods caused by fatigue. Music acts like magic in giving a boost to lagging production lines. Some industrial plants have records of increased productivity as much as 6 to 14 per cent after installing RCA sound and music.

What kind of a sound system is best for you? There is no ready-made system that perfectly suits the noise level, type of buildings and needs of all factory and office layouts. RCA sound engineers will be glad to make a survey of your requirements. They will map out a sound system program to fit individual needs of your organization. No obligation, of course.

RCA Plans and Engineers Sound Systems for . . .

FACTORIES	CHURCHES	STORES
OFFICES	HOTELS	TRANSPORTATION TERMINALS
SCHOOLS	HOSPITALS	WAREHOUSES

—any place where people congregate.

For complete details, contact your nearest RCA Sound Systems distributor, or write: Sound and Visual Products, Dept. 16H-S, RCA, Camden, N.J.

SOUND AND VISUAL PRODUCTS
RADIO CORPORATION of AMERICA
ENGINEERING PRODUCTS DEPARTMENT, CAMDEN, N.J.

In Canada: RCA VICTOR Company Limited, Montreal

skylines... by Otis

In Salt Lake City, a background of unique historical lore blends with the activity of modern commerce. Founded by the Mormons under Brigham Young in 1847, Salt Lake City soon became a great agricultural center. It's still growing fast under the stimulus of Utah's vast metal mines and new steel industry. Look at its skyline. Why? 582 of Salt Lake City's 812 elevator installations are by Otis. That's why we say that skylines are the business of Otis.

THEY SHALL HAVE MUSIC.

Want to have your spirit elevated too? Then ride in an elevator that plays music by 'Muzak'. Something new? Quite. In the Beggs Building in Columbus, Ohio; and in the Palmolive Building in Chicago, among others, the cares of the business day are now wafted away on the notes of a lilting melody.

DON'T PUSH.

The newest way to call an elevator is by simply 'touching' a plastic arrow in the landing fixture. What happens? The electronic 'touch button' lights up. An electronic 'brain' receives your call and automatically stops an elevator at your floor. It's the world's first Electronic Signal Control for elevators. By Otis, of course.

STAIRS TOO MUCH FOR YOU?

A Personal Service Elevator will keep you in the family circle. It runs on ordinary lighting current as quietly as a refrigerator; installs with little fuss or bother; comes in car sizes that accommodate up to four persons or a wheel chair and attendant. And naturally, it operates easily with full Otis safety. Write for Bulletin B-482I.

Otis maintains a nation-wide technical and maintenance service through 257 offices. We're always ready to discuss any type of elevator or Escalator* installation.

ELEVATOR COMPANY

Home Office: 260 11th Ave., New York 1, N. Y.

*Escalator is a registered trade mark of the Otis Elevator Company. Only Otis makes Escalators.

trucks brought in the largest chunk of Harvester's sales; tractors and power units, the second largest slices. Parts came third, with farm implements in fourth place.

• **Slow Movers**—More surprising than the volume of its parts sales, however, was the item-by-item distribution of parts sales. Harvester sells about 280,000 different spare parts. Only 5,000 of these items sell more than 5,000 units per year. And 20% of the total number of parts sell less than one item per branch a year.

No self-respecting drugstore or supermarket would stock items with such a slow turnover. But Harvester has to keep the farmer's old equipment running—until the company can sell him something newer.

• **Slow Work**—Dealers franchised by International Harvester carry about 25,000 to 30,000 different parts. In the past they have counted on the Harvester-owned branch warehouses for slow-moving items (branch warehouses usually handle parts, and always handle complete machines and accessories). When an old machine in the dealer's district broke down, the dealer had to wire the branch. And sometimes—though not often—the branch had to go to the factory for the needed part. This took time and trouble, resulted in service not quite so good as Harvester wanted to give.

• **Heavy Inventory**—It also meant that every branch had to carry large inventories; these consisted not only of the fast-turnover items, but also those parts for which the demand was small and sporadic.

When the new parts depot setup is rolling, parts buyers will have better, surer service. In addition, the company and its dealers expect to save on inventory: Harvester-owned and franchised outlets won't have to carry so many items. In a territory served by one of the new parts depots, those depots will carry the low-turnover items.

• **Improvement**—The system would work out like this. Say one of the new depots serves 1,000 dealers. Under the old setup, each of those 1,000 dealers might carry one unit of a particular low-turnover part—just in case. That would bring the total of those units in the area to 1,000. Now, the dealers just won't carry such an item. The depot will carry 100 for the whole area, and ship one in a hurry to the dealer who needs it.

• **Mechanized Handling**—International Harvester looks for some other savings, too, through improved materials handling procedures. The new depots are being equipped with the last word in handling machinery (pictures, page 42).

Most of the incoming shipments arrive in collapsible pallet boxes. In

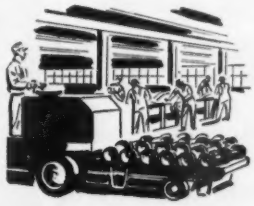
Here's why...

. . . America's Top Industries specify ELECTRIC Industrial Trucks

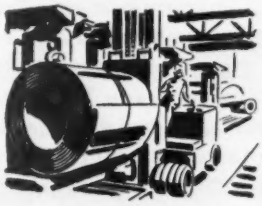
Across the country, America's top industries are specifying electric industrial trucks—because they know *from experience* that battery power means *lowest-cost-per-ton-handled.* The dependability, rugged construction, low maintenance cost and other inherent advantages of electric trucks add up, in every case, to *higher profits.*

Here are only a few examples (the names of these users, and many more, are available on request):

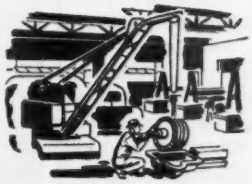
ONE OF THE LARGEST AUTOMOBILE PLANTS reports: "increased tonnage handled per man-work-hour . . . have used battery-powered trucks for 19 years . . . maintenance is quite low!"



A BIG-NAME STEEL COMPANY says: ". . . at one time other types of equipment were used in our . . . . . Department, but we swung over to battery-powered trucks for reliable, low-cost operation."

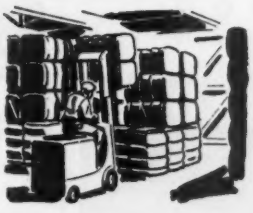


A LEADING PRODUCER OF TURBINES, CONDENSERS AND BLOWERS, whose electric truck fleet is in use 12 hours a day, points out "no unscheduled loss of service" and "availability . . . all that could be desired."



ONE OF THE LARGEST PLATE GLASS MAKERS depends on the smooth starting, acceleration and stopping of battery-powered trucks to keep product damage at a minimum and assure maximum safety for employees.

A LARGE MANUFACTURER OF SURGICAL BANDAGES AND TAPES, handling thousands of pounds of highly inflammable raw cotton and chemicals daily, praises battery power's freedom from fire hazard, calls electric trucks "ideal in all areas."



ONE OF THE FOREMOST NATIONAL BAKERS, whose foodstuffs are likely to absorb contaminating odors, calls the cleanliness of battery-powered trucks entirely satisfactory.

THE ELECTRIC INDUSTRIAL TRUCK ASSOCIATION

29-28G FORTY-FIRST AVE., LONG ISLAND CITY 1, N.Y.

The MATERIAL-HANDLING HANDBOOK contains many ideas for lowest cost material handling, taken from the experience of users such as those listed above. Write for your free copy.

ARE YOU TEEING OFF WITH A PUTTER?

Ridiculous, isn't it! But no more ridiculous than trying to get production efficiency with the wrong crane!

Plant conditions change. Products and production methods change. The crane that may have fitted the job perfectly a few years ago may be entirely inappropriate for your present materials-handling needs.

Experienced Whiting Crane Engineers are qualified by experience to analyze your individual plant conditions and advise whether rehabilitation or replacement of your present crane equipment is desirable for over-all materials-handling economy. They are experts in analyzing—then designing and building cranes to meet individual plant requirements.

ANNOUNCEMENT—*Whiting has acquired the patents, manufacturing and sales rights to Spencer & Morris Tramrail Systems. These, combined with Whiting Hoists, Light Cranes, and Heavy Cranes enable Whiting to supply a complete, fully integrated overhead materials-handling system.*

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WHITING
Overhead Traveling CRANES
BUILDERS OF QUALITY CRANES FOR OVER 60 YEARS

many cases, the pallet box doubles as a storage bin. Hinged side-sections make it easy for an order-filler to get at the contents.

• **Processing**—Dealers' orders get efficient processing. Before the first item on the order is filled, the order has cleared the mail desk, credit desk, order-register desk, quantity control group, tabulating room, and order-editing section. A bank of accounting machines prints a three-copy form; at the same time it makes tags that tell the order-filler the quantity, part number, and where the bin is located. Operations go by the clock. Before an order even reaches the depot floor, its time of arrival at the shipping station has already been scheduled and marked on the truck.

The order-filler picks out the parts from the bins or shelves, stacks them on a double-decker tow truck, and hitches the truck to an overhead towline. The towline pulls the truck to the packing stations. The traffic and shipping supervisor, at the loading area, has the job of the final weighing, loading, and routing.

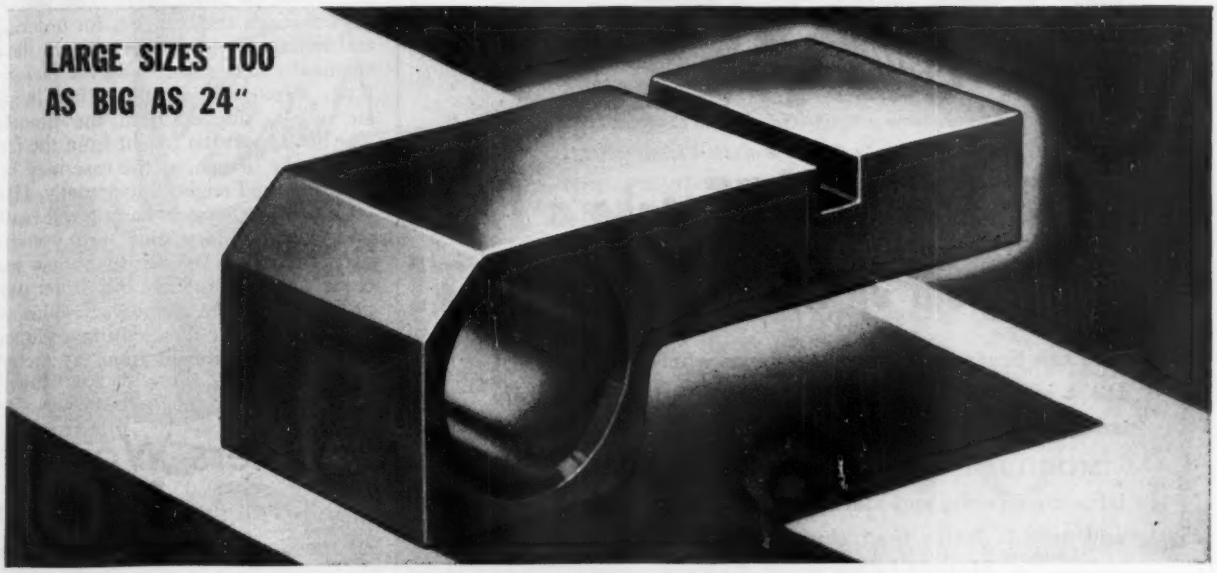
• **More Depots Planned**—Besides the depots now operating in Baltimore and Richmond, Harvester plans to open units in St. Paul, Albany, Memphis, Atlanta, Dallas, Kansas City, Chicago,

High-Voltage Publicity

These hat-like objects the two young ladies are holding aren't hats at all. They're suspension insulators. This is just a way Ohio Brass Co., Barberton, has of telling its customers that women's styles may come and go, but its high-voltage insulators haven't changed their look in 37 years. The lass at the right, a la mode of 1911, is holding an insulator of the same vintage. The girl at the left is holding the 25-millionth insulator turned out at the company's plant—same design, same use.

OILITE

Finished MACHINE PARTS



with NO Machining...

Finished OILITE parts made from metal powders offer you many advantages including the following:

- ★ Precision parts at lower cost.
- ★ More than 20 types of machining operations eliminated.
- ★ Mass production even on designs involving profiling and "depressions".
- ★ No capital investment or tooling programs on your part.
- ★ Parts impossible to machine economically can be made readily of OILITE—allowing you greater freedom of design.
- ★ Complete engineering service at plant and in the field.
- ★ Parts of either ferrous or non-ferrous materials.
- ★ Metallurgically and structurally homogeneous—no imperfections.
- ★ Self-lubricating surfaces if desired.
- ★ Quicker delivery assured.

Send your blueprints to Field Engineer or Home Office. Address Dept. K.

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Division of Chrysler Corporation

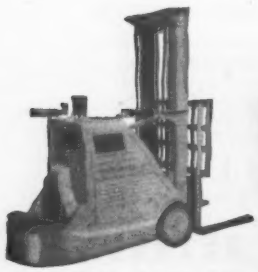
FIELD ENGINEERS AND SUPPLY DEPOTS IN PRINCIPAL CITIES

HANDLING COSTS *take a* FALL *when you team up with* MOBILIFT!

You can bring handling costs down where they belong! It's a simple matter with MOBILIFT (*affectionately called the "Mighty Midget" by thousands of users*).

MOBILIFT eliminates costly re-handling. It loads, lifts, transports, and stacks in one continuous motion—and does it faster than any other lift truck. The basic reason for MOBILIFT's speed is its patented clutch which eliminates all gear shifting. This factor alone means easier operation, less space required and more trips per hour.

Let a MOBILIFT specialist show you how you can cut your materials handling costs with the "Mighty Midget." Mail the coupon today!



MOBILIFT "The MIGHTY MIDGET"

MOBILIFT CORPORATION
835 S. E. Main Street, Portland 14, Oregon B-W

Please send me your illustrated folder on Mobilift operation.

Name_____

Firm_____

Address_____

City_____ State_____

Denver, and one other city, not yet picked in the Pacific Northwest.

The new depots won't replace the branch warehouses. They will supplement them. In some cases, the branches will give up their parts functions entirely, shifting them to the depots. But no branches will be closed—they still have to handle the tractors, binder twine, etc.

• **Pricing**—Pricing of the Harvester line, including service parts, will continue in general on an f.o.b. basis. The dealers work through the branches for ordering and billing. Carload shipments to dealers usually come direct from the factory. L.c.l. shipments, on the other hand, are usually shipped from the branch. The dealer pays the freight from the factory or the branch, as the case may be.

• **Paying the Freight**—Incidentally, Harvester's pricing system has a novel twist, on new machines only (not service parts). On l.c.l. shipments of new machines from the branch, the dealer pays l.c.l. freight from the branch—plus an additional charge representing a proportion of carload freight from the factory to the branch.

Jewelers Worry

Credit jewelers fear return of controls over credit. Sales volumes and instalment buying are off as it is.

The credit retail jewelry business isn't doing too well this year. As a result, credit jewelers are the first to get the jitters over the possibility that consumer credit controls might be slapped on again—as proposed by President Truman.

They had a chance to air their opinions on the subject last week at the annual convention of the National Assn. of Credit Jewelers in Chicago. And they did: Credit restrictions—or even voluntary restrictions—over jewelry sales are uncalled for, they said. Here is the way they reasoned:

• **Volume Off**—Admittedly, instalment sales of jewelry have soared this year, in some cases 100% over wartime lows. But they are still below prewar levels—in relation to sales. The jewelers estimate that during the first five months of the year, instalment sales accounted for about 70%-75% of their total business (including nonjewelry items). Prewar, instalment sales ran about 85%-90%.

The point is, the trade is feeling a sales pinch.

It isn't the total dollar volume that's bothering the jewelers. Even though that has dropped slightly—about 10% for the first five months of this year as

PROFITS FOR SALE!

Ditto offers you a bargain in profits! Ditto actually costs you nothing—yields substantial savings in time and money—savings that repeat many times over, year after year.

Ditto copies anything—typed, written, printed, or drawn. Its flexibility makes Ditto widely used for business systems—payroll, production, order-billing, purchasing . . . hundreds of other uses.

Firms in every line of business have attested to sensational savings with Ditto. Check the list below—see where you can profit by adapting Ditto to fit your needs. Mail the coupon today!

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Payroll
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CHECK THESE PROFIT-MAKING APPLICATIONS. MAIL THE COUPON

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- ☐ Payroll Systems, Accounting Reports
- ☐ Salesmen's Bulletins, Price Book Sheets, Quotas, etc.
- ☐ Charts, Maps, Graphs, Drawings, etc.
- ☐ Accounting Statements & Reports

WHOLESALERS
- ☐ Order and Billing Systems
- ☐ Salesmen's Bulletins
- ☐ Price Book Changes

FINANCIAL INSTITUTIONS
- ☐ Daily, Weekly and Monthly Statements
- ☐ Trust Reports, Stock Transfers
- ☐ Installment Loan Systems

INSURANCE COMPANIES
- ☐ Policy Card Records, Bulletins to Agents
- ☐ Reports, Statements & Abstracts
- ☐ Abstract of Claim

PUBLIC SERVICE
- ☐ Requisition and Purchase Order Systems, Bid Requests
- ☐ Accounting & Finance Statements
- ☐ Drawing & Sketches

RAILROADS
- ☐ Passing Car Reports, Operating Reports
- ☐ Car Interchange & Interline Exchange
- ☐ Accounting and Financial Statements

DEPARTMENT STORES
- ☐ Accounting and Financial Reports
- ☐ Sales and Stock Reports
- ☐ Ruled Forms, Bulletins, etc.

CHAIN STORES
- ☐ Inventory Sheets
- ☐ Warehouse Order and Billing
- ☐ Price Lists and Changes
- ☐ Advertising Layouts

CONSTRUCTION AND BUILDING
- ☐ Specifications, Bid Requests
- ☐ Drawings and Sketches
- ☐ Payroll
- ☐ Purchasing Receiving

PRINTING AND PUBLISHING
- ☐ Printing Orders
- ☐ Advertising and Circulation Statistics
- ☐ Advertising Presentations
- ☐ Reports and Statements

ASSOCIATIONS
- ☐ Bulletins to Members, Credit Inquiries
- ☐ Statements and Reports, House Organ

MEAT PACKERS
- ☐ Order and Billing Systems
- ☐ Sales Bulletins and Price Lists
- ☐ Accounting and Financial Statements

ACCOUNTANTS
- ☐ Profit and Loss Statements
- ☐ Balance Sheets, Audit Reports
- ☐ Ruled Forms, Working Papers
- ☐ Income Tax Reports

GOVERNMENTS
- ☐ Accounting Reports, Bid Requests
- ☐ Purchase Orders
- ☐ Engineering Drawings
- ☐ Charts and Graphs
- ☐ Specifications
- ☐ Material Lists.

Ditto, Inc.
2242 W. Harrison Street
Chicago, Illinois

Gentlemen: Kindly send me further information on how I can make profits with Ditto in my business, as checked above.

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Company.....

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MAKING FLYING SAFER

GAYLORD CONTAINER CORPORATION

Equips Its Beech D-18S With IRVIN "Chair Chutes"

To make certain that passengers and crew members are fully protected in an emergency, the Gaylord Container Corporation of St. Louis, Missouri, has equipped its Beech D-18S with Irvin Custom-Built "Chair Chutes." These new Air Chutes* are tailor-made for business and personally owned aircraft. They make flying decidedly safer and are just as essential on a plane as life preservers on a ship. Many of America's best-known corporations and private aircraft owners recognize this fact and are equipping their planes with these unique Air Chutes.* Let us know the type of plane you own and we will send you full particulars.

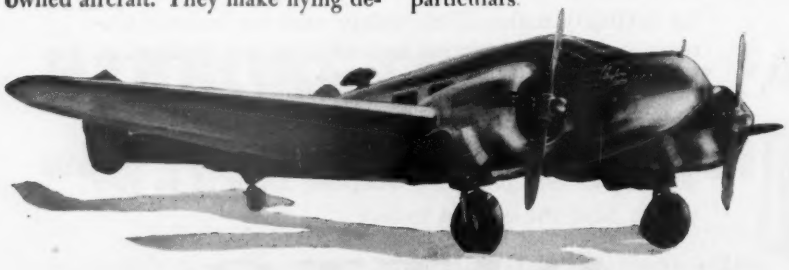

Illustration shows Irvin Custom-Built "Chair Chutes" installed in a Beechcraft. The chutes are fitted into the backs of the seats and are upholstered to match the rest of the chairs. "Chair Chutes" are not worn ordinarily, are merely soft, comfortable back rests, but are instantly available in an emergency. These chutes are relatively inexpensive and are easily installed in all standard makes of planes. Write for circular.

FEEL SAFER
...BE SAFER
with Irvin
Custom-Built
"Chair Chutes"

IRVIN Air Chute
The Life Preserver of the Air

There are now over 35,000 registered members of the Caterpillar Club. Should you qualify, please write us.

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IRVING AIR CHUTE CO.
INCORPORATED
1668 JEFFERSON AVENUE
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Pacific Coast Branch: 1500 Flower St., Glendale 1, Calif.

against last—it is still high compared with prewar. But the sales of jewelry itself are off. N.A.C.J.'s figures show that for the first five months of 1948 they were running 25% behind last year.

• **Nonjewelry Sales**—The credit jewelers have been making up some of the difference by selling more nonjewelry items. Here a definite trend turns up: Association surveys show that nonjewelry items—small electrical appliances, cameras, luggage, table radios, china, and glassware—now account for close to 40% of members' total sales. In the case of some chain credit jewelers nonjewelry sales run as low as 20%; in other cases as high as 50% of total sales.

Opinion in the trade over the trend to nonjewelry sales is divided. Some jewelers consider the present proportion too high for health because (1) the merchandise doesn't fit into a jewelry store setup, and (2) margins on such merchandise are smaller than necessary for profitable jewelry store operation. The other school of thought contends that the use of such low-profit merchandise as account-openers and add-ons keeps instalment accounts alive in the intervals between major jewelry purchases by middle income families.

• **Diamonds Still First**—Diamonds continue to hold first place in dollar volume of credit jewelry sales. Diamonds, largely in the $100-$500 range, now account for 21%-22% of credit jewelers' total jewelry volume. During the war they amounted to 27% of jewelry sales vol-

Shoppers See . . .

When you are putting something new on the market, there's nothing like giving it the right send-off. To introduce a new deodorant soap, Armour & Co.'s Dial, this Oklahoma City drugstore plastered its window with signs, inviting crowds to look inside.

ume. Credit jewelers say that less than 10% of their volume comes from the sale of all other precious and semi-precious stones.

Prewar, the biggest sellers were watches: they normally amounted to 30% and more of jewelry sales. Watch sales—now in second place—total only about 10%. Jewelers attribute their relative decline in sales volume in part to lower watch prices since the war.

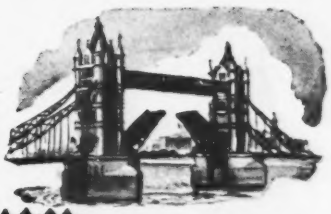
• **Soft Pedal**—To upgrade their reputation as diamond experts, leading credit jewelers are organizing the Diamond Council of America. Purpose: to educate credit jewelers in diamond values.

Even so, credit jewelers generally hesitate to stress diamonds as an investment in their advertising and promotion, for two reasons: (1) They consider the average price paid for a diamond ring by an instalment buyer too small to put it in the investment class; and (2) such buyers rarely understand that the wholesale price a jeweler will pay for diamonds offered them usually comes to little more than half the retail value. Jewelers fear that disappointment to small purchasers over the resale price of their diamond would hurt diamond sales on such a basis.

• **Other Gripes**—Other problems agitating the trade: the 20% luxury tax, which jewelers claim is largely responsible for shrinking sales; sales of jewelry and similar merchandise tax-free and at discounts by Army and Navy post exchanges to nonmilitary personnel; proposals in some states to license watch repairmen.

. . . New Cake of Soap

This is what the onlookers saw—a bathtub demonstration of the product. The drugstore found only one bit of trouble: The peep-hole was so small that a mirror had to be placed at one end inside so that the ogling spectators could get a better view.



LYKES

Bridge to Britain

FROM GULF PORTS

Lykes U. K. Line provides a vital link for overseas trade with our neighbors in England, Scotland, Ireland and Wales. Its modern fleet of fast, *regularly scheduled* C-type cargo vessels, operating from and to United States Gulf ports, is one of six major ocean shipping services *geared to today's world-wide trade requirements.*

Exports and imports of Mid-Continent and Southern States routed *via Gulf Ports and Lykes* move along lines that save time and transportation costs.

Thoroughly experienced in every phase of cargo handling and with an American flag fleet meeting every standard of the United States Merchant Marine of which it is a part, Lykes offers the *speed, care and dependability* so essential to those engaged in world commerce.

Write for the folder, "Lykes Lines and Gulf Ports." Address Lykes Bros. Steamship Co., Inc., Dept. C New Orleans, La.

American Flag Trade Routes

U. K. LINE—From New Orleans, Houston, Galveston, other U. S. West Gulf ports and Tampa, to all principal ports of England, Scotland, Ireland and Wales.

CONTINENT LINE—From New Orleans, Houston, Galveston, other U. S. West Gulf ports and Tampa, to Continental Europe, Scandinavia and the Baltic.

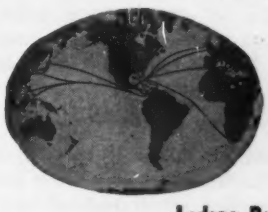
MEDITERRANEAN LINE—From U. S. Gulf and South Atlantic ports to the Mediterranean and Black Sea areas.

AFRICA LINE—From U. S. Gulf ports to South and East Africa.

ORIENT LINE—From U. S. Gulf ports to the Far East, including The Philippines, Japan, China, Korea, Siam, Straits Settlements and Netherlands East Indies.

CARIBBEAN LINE—From Houston, Galveston, Lake Charles and other U. S. West Gulf ports to Cuba, Puerto Rico, Haiti, Dominican Republic, Aruba, Curacao, Venezuela, E. Coast of Colombia and Canal Zone.

LIMITED PASSENGER ACCOMMODATIONS

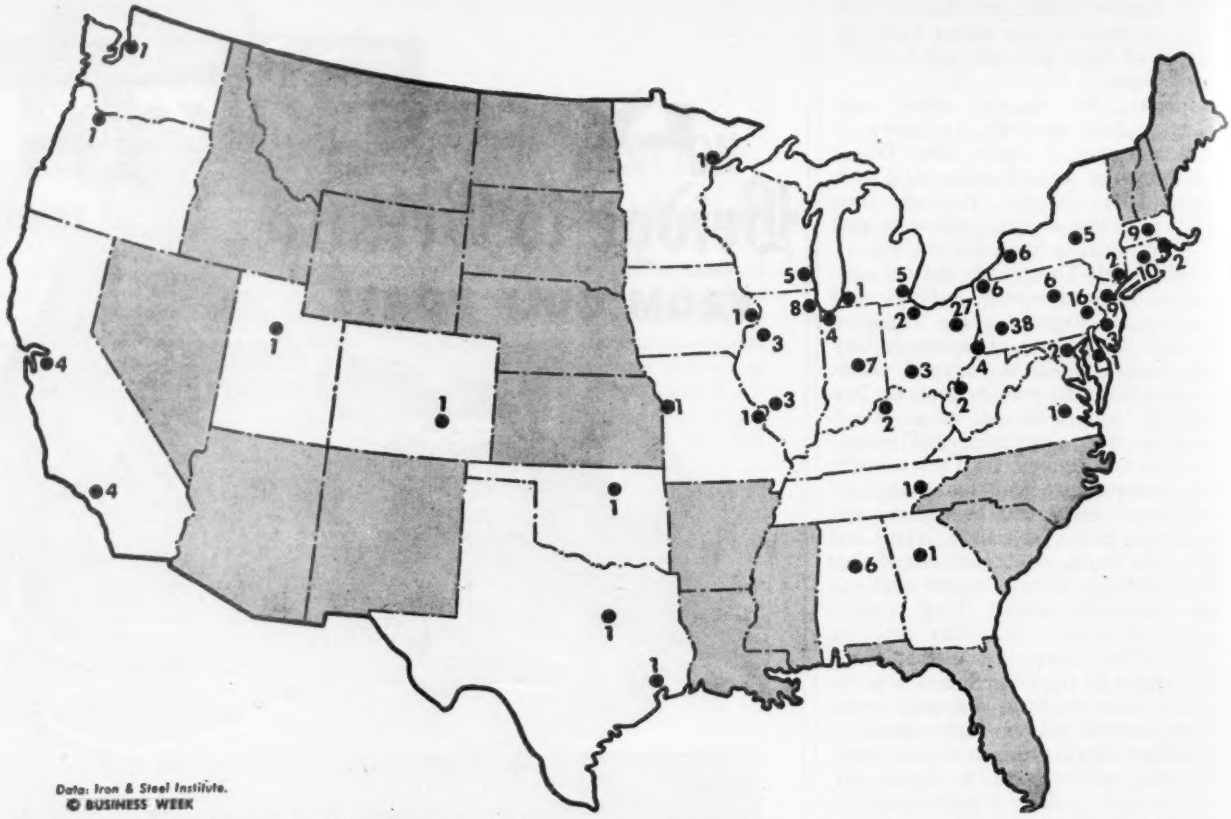


LYKES LINES

Lykes Bros. Steamship Co., Inc.

Offices at: NEW ORLEANS, HOUSTON, GALVESTON, NEW YORK, Baltimore, Beaumont, Chicago, Corpus Christi, Dallas, Gulfport, Kansas City, Lake Charles, Memphis, Milwaukee, Mobile, Port Arthur, St. Louis, Tampa, Washington, D. C.

OFFICES AND AGENTS IN PRINCIPAL WORLD PORTS



WHERE STEEL FINISHING MILLS ARE LOCATED: Each dot on the map represents a steel-marketing area (some are entire states); the figure next to each shows the number of mills in that state or area. Shaded states denote no steel-finishing capacity

Steel Consumers Study Marketing Map

Shift to f.o.b. prices combined with varying price boosts have buyers confused as to how much they're really paying.

The steel industry is still making news of marketing importance. First it was the changeover from a basing-point system of pricing to f.o.b. mill prices (BW—Jul.10'48,p19). Now it is price increases.

Last week most big mills boosted their prices on an average of 9% to 11%. Price advances varied a good deal from product to product and from company to company, so most of the country's 335,000 steel buyers are completely confused as to how much their steel is going to cost.

• **Result**—The most important result of these moves is that prices of practically all products using steel in any quantity will have to be increased. Typical is the experience of Detroit's big automobile industry. Steel buyers in Detroit expect that, when the situation clears up, steel is going to cost them from $10 to $13 a ton more.

For one thing, steel makers in Pittsburgh and Chicago have raised their prices. For another, these sources no longer absorb some of the freight charges into Detroit; this factor alone will cost a Detroit buyer $5 a ton more on deliveries from Pittsburgh; $4.60 a ton more on deliveries from Chicago (the freight that used to be absorbed, and isn't any more).

• **No Relief**—Nor will he be able to save that charge by buying from Great Lakes Steel Co., Detroit's only steel mill—because, last week, Great Lakes announced f.o.b. mill prices from $4 to $7 a ton higher than Pittsburgh and Chicago f.o.b. prices.

Another factor in the Detroit situation: Much of its steel comes into the auto plants as parts. These are made around the country and were always shipped into Detroit on an f.o.b. basis. Two factors will cause price increases here: (1) The parts makers will have to charge more to cover higher steel costs; (2) freight costs are higher.

• **Confusion**—Perhaps the biggest headache for the steel consumers is figuring out just how much steel will cost. Here's what they're up against:

Carnegie-Illinois Steel Corp. (Big Steel's biggest subsidiary) is now quoting $67 a ton on carbon steel bars, f.o.b. any of its mills. Jones & Laughlin Steel Corp.'s f.o.b. price for the same product is $71 a ton. Bethlehem Steel Co. first announced an f.o.b. price of $68 a ton at any of its eastern mills; a few days later revised it to $67.

On hot-rolled strip, Carnegie-Illinois is quoting $65 a ton; J. & L., $66. Bethlehem first quoted $66, then changed to $65.

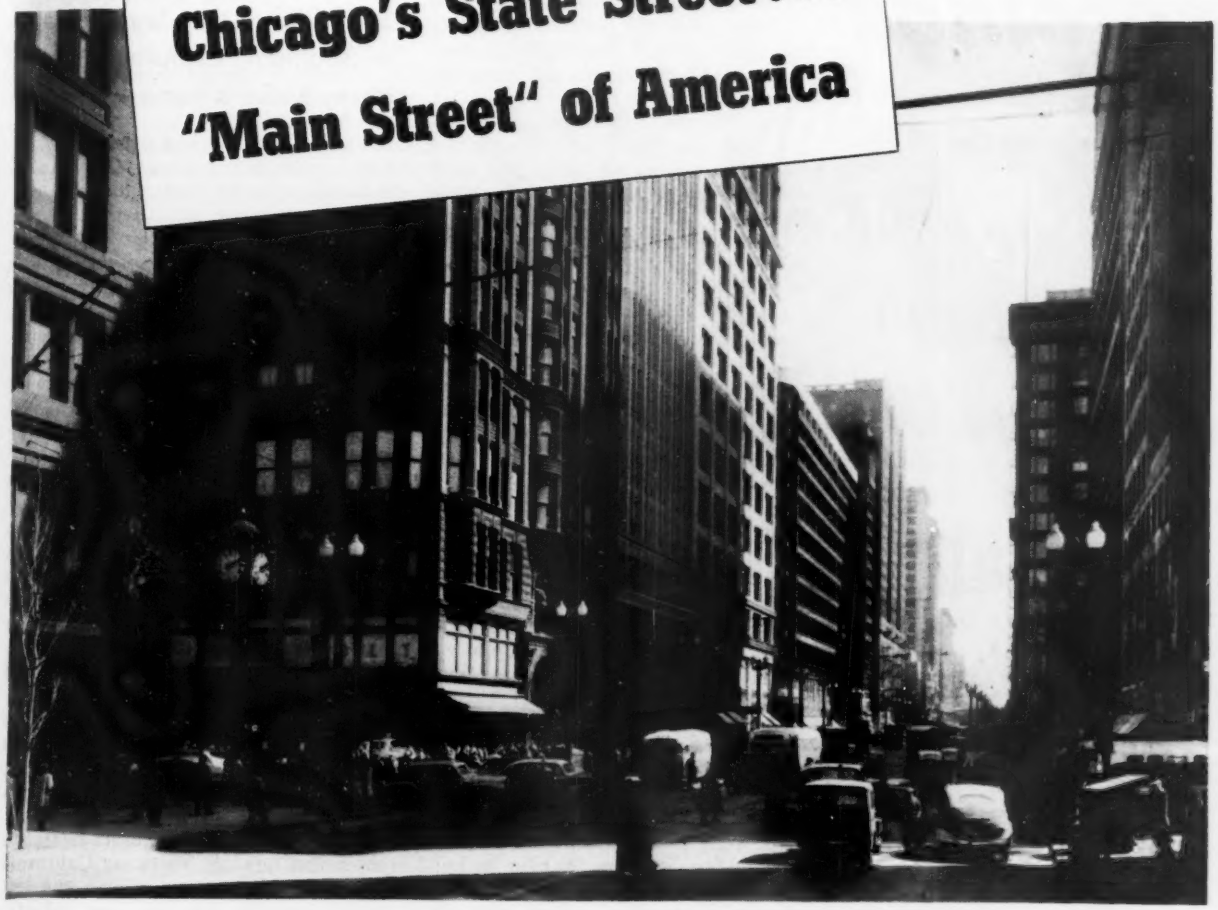
On carbon steel plates, C.-I.'s price is $68 a ton. J. & L. is quoting $72; Bethlehem, $69.

• **Paying the Freight**—To all of these prices, freight costs must be added. Many a steel user who never saw a freight-rate book in his life is struggling today to set up a traffic department. Its job: to buy the cheapest transportation from the steel mill to the customer's factory.

This is a tough problem. Rail freight rates have advanced several times in the past year (page 20). Freight cars are scarce. Many steel shipments are made over three or four different railroads, sometimes at differing rates. Steel makers retain the right to ship from any of their nearby plants when necessary.

• **Cheaper**—Some steel people think trucks might be the answer for small

Chicago's State Street . . . "Main Street" of America



HERE IN CHICAGO—on a grand scale and in heightened tempo—is every Main Street in America.

Along State Street's mighty mile are 1000 acres of retail floors—the greatest concentration of retail selling space in the world.

Here 20,000 manufacturers—American, European, Latin-American and Asians—offering everything from pins and playsuits to artichokes and airplanes, feel the turbulent pulse of retail America each working day.

At this birthplace of the American department store, manufacturers of retail goods have for many decades evaluated consumer recognition and acceptance immediately and in certain terms.

State and Madison is the world's busiest shopping corner. A daily average of 450,000 customers throngs the sidewalks, aisles and escalators of the huge department stores of these nine dynamic blocks, accounting for 60 per cent of Chicago's department store sales, which amounted to 326 million dollars in 1947. The remaining 40 per cent of the sales are made in 75 important community shopping centers which fan from State Street to the city limits and into the surrounding residential suburbs.

If a "better mousetrap" can be sold anywhere, it can be sold in Chicago. Within the immediate trading area are 5,314,000 persons. Seven million consumers within a 100-mile radius consider Chicago their market. There are ten million persons within 150 miles—sixty million within 500 miles—and untold thousands who annually vacation in the area to enjoy its many cultural and recreational features.

State Street is more than an expression of the vitality, wealth and aggressiveness of Chicago and Northern Illinois, even more than a thousand "test markets" in one. It is itself a tremendous and typical marketplace for goods from everywhere in America and the entire world.

This is one of a series of advertisements on the industrial, agricultural, residential and cultural characteristics of Chicago and Northern Illinois

TERRITORIAL INFORMATION DEPARTMENT

Marquette Building—140 South Dearborn Street, Chicago 3, Illinois—Phone RANdolph 1617

COMMONWEALTH EDISON COMPANY • PUBLIC SERVICE COMPANY OF NORTHERN ILLINOIS
WESTERN UNITED GAS AND ELECTRIC COMPANY • ILLINOIS NORTHERN UTILITIES COMPANY

When You Use
Forgings
For Stressed Parts of
Operating Mechanisms
You have done all that can be done to
Forestall..

1. DOWNTIME
DUE TO FAILURE OF PARTS
2. LOSS-TIME
ACCIDENTS RESULTING
FROM FAILURE OF PARTS
3. INCREASES IN
OPERATING COSTS

• Forgings reduce parts failures and protect both the manufacturer of the equipment and the user of it from unpredictable emergencies. There is no substitute for the strength and toughness inherent in the forged fiber-like flow-line structure in steel. The forging method of fabricating parts controls and concentrates the fiber-like flow-line structure of metals at points of greatest shock and stress. Consult a Forging Engineer while a part is in the design stage because it is important that the design utilize fully the fiber-like flow-line structure obtainable only in forgings.

Write for booklet on "Metal Quality—Hot Working Improves Properties of Metal" which illustrates and explains fiber-like flow-line structure of forgings.

DROP FORGING ASSOCIATION
605 HANNA BUILDING
CLEVELAND 15, OHIO

customers. Truck rates are lower than rail rates. But steel mills say they do not have enough truck-loading space to handle any great increase in truck shipments. Another possibility is water shipments. But the steel companies do not have enough loading-dock space either. And many steel consumers aren't on navigable waters.

But this whole problem may not be so bad as many steel users had feared; most steel makers are offering to quote delivered prices which include actual rail freight.

• **Geographical Shifts**—The steel-industry move from basing-point to f.o.b. prices seems likely to cause shifts in the geographic pattern of many steel-consuming industries—a move closer to steel sources (map, page 74). The first major sign of such a shift: Last week Kelsey-Hayes Wheel Co. of Detroit bought a plant at McKeesport, Pa., from Jones & Laughlin. McKeesport is only 12 mi. from Pittsburgh.

• **Tinplate Consumers**—Users of tinplate are another possible example of industrial migration toward the big steel plants. All tinplate makers were on an f.o.b. basis by the end of last week. Carnegie-Illinois, last to make the move, announced f.o.b. mill prices at $6.80 a base box at its Irvin (Pittsburgh) and Gary Works, effective Aug. 1.

So big consumers of tinplate (like American Can Co. and Continental Can Co.) are going to pay more in the future—by the amount of the freight. Last week it was reported that Continental would revive its plan to build a new can-making plant near the Allegheny County (Pa.) airport, and close to the Irvin works of Carnegie-Illinois. This project was first discussed about two years ago, and then dropped. At that time, Continental also considered building another can plant near the Weirton (W. Va.) mill of Weirton Steel Co.; its present status is unknown.

Another plant-move development: Youngstown Sheet & Tube Co., one of the big steel producers, has established an industrial development division. Its job is to help company customers who want to study the problem of moving their plants into the Youngstown area.

• **Big Questions**—There are a couple of important questions which still remain unanswered in the present steel-industry confusion:

(1) What is going to happen to the many smaller steel users who can't afford to invest in expensive new plants near the big steel mills in already-crowded Pittsburgh, Chicago, Cleveland, or Youngstown?

(2) What is going to happen to steel producers and consumers when the buyers' market again takes hold? Will they all be able to survive under a new, and as yet unknown, marketing pattern?

K.-F. Puts on Steam

Auto maker will spend $425,000 to spur lagging sales in southern California. That's Henry Kaiser's home ground.

Kaiser-Frazer has laid siege to the big Los Angeles auto market. Henry Kaiser is having a harder time selling his cars on his own home ground than in any other part of the country.

• **Saturation Drive**—This week, K.-F.'s 50-odd dealers in the southern California area were readying for the siege. It started when son Edgar Kaiser, vice-president and general manager, flew out to Los Angeles from Willow Run with a message: K.-F. will spend $425,000 in a six-month "saturation" advertising drive to step up sales in that area.

K.-F. will buy at least one full page each week until Christmas in 47 southern California newspapers. Added to that, the company has taken six hours a week of prime evening time on two radio stations for the rest of the summer. The money will come from a factory appropriation, not the dealers.

(K.-F. isn't skimping on its national advertising, either. It has sewed up Walter Winchell for a two-year contract to the tune of $1,352,000—or about $6 a word—for the period. After a 17-year stint with Jergens Lotion, he'll go on the air for K.-F. next January.)

• **Sales**—K.-F. won't give exact figures to show just how its Southern California Division sales stack up against the rest of the country. But the auto industry hears that first-quarter K.-F. deliveries in all of California ran less than 3% of the K.-F. national total. For all other makes of cars, the average registration for California was about 8%.

Other places, K.-F. is doing pretty well. For the quarter ended June 30, 1948, over-all sales were $92.7-million; in the same 1947 quarter, they were about $52.9-million.

• **Reasons Unknown**—Nobody knows exactly what the hitch has been in the Los Angeles area. San Francisco has been slow, too, though not so noticeably. Some people think that the ballyhoo tactics of Earl ("Madman") Muntz, original K.-F. distributor and principal dealer in Los Angeles, hurt sales. Others guess it's a case of prophet-without-honor trouble. Whatever the block is, Edgar Kaiser thinks "all this advertising muscle" will knock it down.

To put the drive over, New York advertising agency William H. Weintraub & Co. is trying something new in K.-F. ads. Most of the newspaper layouts—dramatic and artful—will play up one car at a time, instead of both Kaisers and Frazers at once.

READERS REPORT:

In Defense of Utilities

Sirs:

I notice in your magazine under the heading "Power Supply Question" a letter from Secretary of the Interior J. A. Krug [BW—Jul.24'48,p64] in which he makes the following disparaging reference to Charles W. Kellogg, former president of the Edison Electric Institute:

"Your article entitled 'Utilities—Power Paradox' is founded on insufficient facts and sounds so much like Bill Kellogg in the spring of 1941, that I should think even the most calloused wishful thinker would be wary of it."

In 1940, 1941, and 1942, Mr. Kellogg, speaking on behalf of the electric light and power industry, assured the country that there would be ample power for war. The promises were all fulfilled.

Even Mr. Krug, when director of the Office of War Utilities, in a speech at Chattanooga on Feb. 16, 1943, observed: "Power has never been 'too little or too late'."

The promises were fulfilled notwithstanding the fact that in 1942, upon recommendation from Mr. Krug, the government, to further the war effort, canceled some 2.2-million kilowatts of generating capacity under construction or on order and physically removed some generating units from existing power stations for use elsewhere. The record thoroughly vindicates the industry's estimate as reported by Mr. Kellogg.

A preliminary appraisal indicates that once again, in case of war emergency, basic materials, manpower, and transportation would place the limits on war production—not electric power.

H. S. BENNION
EDISON ELECTRIC INSTITUTE,
NEW YORK, N. Y.

For Fairer Tax on Brains

Sirs:

You are to be commended for your editorial, "A Lower Tax on Brains" [BW—May22'48,p124]. This has been a problem of which we in the engineering field have been keenly aware. . . .

For instance during the early thirties I knew scores of outstanding, well qualified, competent engineers who were "on the bench" for a number of years, as the demand for such services during a period of stagnation in construction and industry well near disappears.

These years in many cases represented a large percentage of their years of possible peak earning power. I venture to say in many cases if the earnings and taxes were averaged up over a long period these groups mentioned in the

FOR PERFECT SHIPPING
funnel your merchandise through
ROCK ISLAND
"PACKAGE CARS"
23,052 of these cars annually provide "through freight" service throughout mid-America
When you ship your merchandise via Rock Island "package cars," you benefit two ways. Schedules are uninterrupted because the cars pass through junction points without delay. And your merchandise is better protected because the contents of the cars are undisturbed en route.
Each year Rock Island operates 23,052 of these "package cars." 13,330 of them originate on Rock Island and break bulk at important points on connecting lines. The other 9,722 originate on connecting lines and break bulk at Rock Island stations.
For full information, see your Rock Island traffic representative.
Visit Beautiful "Rocket Village"
CHICAGO RAILROAD FAIR
July 20 to Mid-September
Rock Island
ROCK ISLAND LINES
The Road of Planned Progress

AN UNSEEN SERVICE TO INDUSTRY THROUGH WHICH EVERYONE BENEFITS

Your drinking water supply protected by the discovery of how to stop seepage and waste in concrete reservoirs

"The concrete reservoir in our town has just been leakproofed.

"Engineers tell us that the protection of this concrete basin with a tough NO-OX-ID waterproof coating will save the city millions of gallons of water that usually seep away through cracks and joints in the concrete. It will protect water, too. Assures folks of drinking water that's free from contamination and discoloration."

.....*The Traveler*

MEMO: To Municipal and Industrial Water Supply Engineers. NO-OX-ID is easily applied to new or existing concrete basins, over the entire area or in local areas of seepage. This Dearborn discovery guards property, prevents waste of the finished water you've produced so efficiently.

Dearborn
TRADE MARK REGISTERED

...the leader IN RUST PREVENTIVES AND BOILER WATER TREATMENT

DEARBORN CHEMICAL COMPANY
General Offices 310 S. Michigan Avenue, Chicago 4, Illinois

Canadian Branch: Dearborn Chemical Company, Ltd., 2434 Dundas St., West, Toronto. Offices—Los Angeles • New York • Cincinnati • Denver • Detroit • Tulsa • Indianapolis • Philadelphia Pittsburgh • St. Louis • San Francisco • Shreveport. Agents—in principal cities around the world.

editorial would be, relatively speaking, so poorly paid that there would be a decided decline in the number of young men seeking advanced training to better themselves . . . if such figures got publicity.

Congratulations on this clear, well written article, and to your management for recognizing its importance.

ARTHUR E. ROWE
ARTHUR E. ROWE & ASSOCIATES,
CLEVELAND, OHIO

Sirs:

. . . This is the finest idea I have come across for curing the inequity of the income tax as regards that most important class of citizens, the professional class. They need such an incentive to secure the future, as they lack the assets of the business class to bolster declining earnings. The scheme is easily feasible and the government, over the long run, loses little. It is to be hoped that the idea will soon be incorporated in the tax structure.

I am sending a copy of the editorial on to our senator, Mr. Holland.

C. S. JOHNSON
VICE-PRESIDENT,
CLARK & LEWIS CO.,
JACKSONVILLE, FLA.

Sirs:

You have suggested a very important, healthy tax revision measure for the resuscitation of our dying incentives (as England is so tragically experiencing), and I am writing to our Senators Butler and Wherry, and Congressman Howard Buffett.

Surely there is a way in which initiative can be preserved, and this looks to me like an effective approach.

CORNELIUS J. CLAASSEN
PRESIDENT,
FARMERS NATIONAL CO.,
OMAHA, NEB.

Automatic Wages

Sirs:

All of us will agree that General Motors, in adjusting wages to the cost of living, have done a commendable thing. Cost-of-living increments in wages have been incorporated by others in the past. However, a special feature of their plan is its automatic adjustment. Articles like yours [BW—May29'48,p104] give the impression that the automatic adjustment, in connection with an index, originated with General Motors.

As far as we know, Baker Mfg. Co. independently began such a plan before General Motors. Our original paper is dated Mar. 26, 1948. At our employees' request the automatic adjustment is based on a wage index (factory hourly earnings), rather than cost-of-living index.

However your chart showing the cost

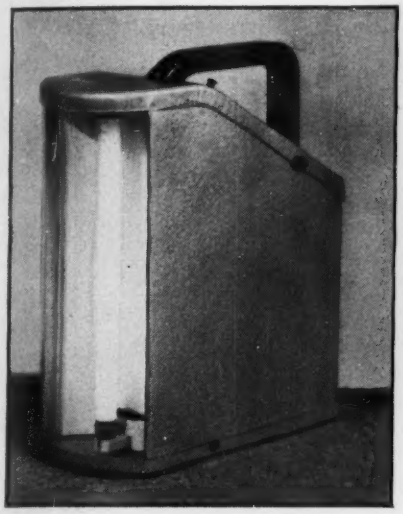
of living and factory hourly earnings [BW—May22'48,p104] demonstrates that there is a high correlation between the two series, so high that it would not affect the wages very much.

Baker Mfg. Co.'s plan is similar to the General Motors Plan, to the best of our knowledge. Obviously this is a case of a like problem producing a like answer.

J. H. MATSON

BAKER MFG. CO.,
EVANSVILLE, WIS.

• We certainly did not mean to give the impression that the wage settlement device adopted by General Motors Corp. this year was a brand new idea. Wage rates have been tied to the cost-of-living index many times before. Baker's method of tying its wage rate to the factory hourly earnings index is an interesting variation.



American Fluorescent Lantern

Sirs:

We noted with some interest and much astonishment your introduction of a portable fluorescent lantern made by some London firm [BW—Apr.17'48, p127].

We quote: "British inventiveness has come up with a fluorescent hand-lamp."

"British inventiveness" seems to be somewhat behind the times, as please note the inclosed picture [above] of our lamplighter, Model F300, which we have been selling to the leading department stores, both in this country and abroad, for the past two years.

STANLEY SONNER

PRESIDENT,
LAMPLIGHTER CORP. OF AMERICA,
BROOKLYN, N. Y.

Recognition for Architect

Sirs:

I was very much surprised to read your report of the Rifkin and Grannick

POWER is the heartbeat of your business

It's easy to get in the habit of taking your power plant for granted. Yet one major accident to a power unit can knock out every department in your business . . . Production, Sales, Marketing, Shipping . . . and deal a heavy wallop to the bank account.

You can reduce this chance of a costly accident by insuring with Hartford Steam Boiler. This insurance and its accompanying engineering inspection services are unique. You benefit from the accumulated "know-how" of 82 years of specialization in the prevention of accidents to power equipment.

Hartford Steam Boiler maintains the country's largest staff of engineers devoted solely to power-plant inspections. These men are located strategically throughout the country. Moreover, their advice has often added years to the useful life of costly installations.

Such advantages have put Hartford Steam Boiler 'way out in front among those who purchase Engineering Insurance. Ask your agent or broker how the Company can help keep your power equipment working safely.

The Hartford Steam Boiler Inspection and Insurance Company
HARTFORD, CONNECTICUT

Covers: Boilers • Pressure Vessels • Steam, Gas and Diesel Engines • Turbines • Electrical Equipment

B.F. Goodrich is a BW advertiser is a BW

And has been for 18 Years

HERE'S WHY! The B. F. Goodrich Company recognizes the importance of reaching and influencing America's management-men who, surveys show, *initiate, specify* and *approve* all major company expenditures. And . . . Business Week regularly carries B. F. Goodrich advertising to the highest concentration of these management-men —at less cost—than any other general business or news magazine.

BUSINESS WEEK FIRST

Year after year!

Other advertisers, too, recognize the selling power of Business Week. That's why, among all general business and news magazines, Business Week again in 1947 was:

- ✓ **FIRST**—in *page* volume of business goods and services advertising. Total: 3110 pages.
- ✓ **FIRST**—in *number* of business goods and services advertisers. Total: 623 advertisers.
- ✓ **FIRST**—in number of *exclusive* accounts in the business goods and services classifications. Total: 229 accounts.

For the past ten years Business Week has maintained this consistent leadership. The reason is summed up in this one brief sentence:

WHEREVER YOU FIND IT,
YOU FIND A MANAGEMENT-MAN
. . . WELL INFORMED

10 YEARS OR MORE IN BW

(Manufacturers' Materials & Supplies Classification)*

Acme Steel Co.
Carpenter Steel Co.
General Electric Co.
B. F. Goodrich Co.
Goodyear Tire & Rubber Co.
Hercules Powder Co.
International Nickel Co.
Keasbey & Mattison Co.
Koppers Co., Inc.
P. R. Mallory & Co., Inc.
Timken Roller Bearing Co.
Westinghouse Electric Corp.

*Based on Publishers' Information Bureau analysis.

No Insurance Program designed to protect and conserve assets is complete without Credit Insurance

WILL RISING CREDIT LOSSES ROB YOU OF YOUR PROFITS?

YOUR PROFITS ARE THE TARGET for rising credit losses. If you realize that your accounts receivable are important assets *at all times* . . . subject to risk *at all times* . . . should be protected *at all times* . . . you'll want to read our book, "HOW TO PLAN CREDIT POLICY."

It gives the essential facts on American Credit Insurance . . . tells you valuable information about setting up a sound credit policy. It may help you solve credit problems . . . prevent an excessive number of delinquent accounts.

Manufacturers and wholesalers throughout the country, in over 150 lines of business, are already protected by American Credit Insurance . . . which GUARANTEES PAYMENT of your accounts receivable for goods shipped . . . pays you when your customer can't.

Phone the American Credit office in your city or write American Credit Indemnity Co. of New York, Dept. 42, Baltimore 2, Md., for a copy of "How to Plan Credit Policy."

J. F. McFadden
PRESIDENT

American Credit Indemnity Company

American Credit Insurance

PAYS YOU WHEN YOUR CUSTOMERS CAN'T

OFFICES IN PRINCIPAL CITIES OF UNITED STATES AND CANADA

(Trenton, N. J.) alteration which won the nationwide contest for store modernization [BW—Jul.17'48,p68].

You write: "Rifkin and Grannick won itself a prize"—giving all the credit to the owners instead of to the designer-architect who created the building and made it win the contest.

I presume it was by mistake that my name was omitted. . . .

VICTOR BOHM
ARCHITECT,
TRENTON, N. J.

• Business Week is glad to give Reader Bohm his merited credit.

Aid to a Husband

Sirs:

I have heard a number of comments about your article on fire insurance reciprocals [BW—Jul.3'48,p28], and all of them have been favorable, which agrees with my opinion. To me the most illuminating was one made by my wife, who said that your article explained our business to her far better than I had ever been able to do.

Please accept our congratulations for a clear and comprehensive piece of writing.

ERNEST B. BROWN
PRESIDENT,
ERNEST W. BROWN, INC.,
NEW YORK, N. Y.

Reforestation Survey

Sirs:

Permit me to express my great appreciation for the fine survey of the forest situation which you published in Business Week [BW—Jul.10'48,p22].

We are glad to have had the opportunity to work with you.

I want to call your attention to a slight error. A sentence reads: "During the 1947 planting season this nursery [Forest Industries Tree Nursery at Nisqually, Wash.] furnished enough seedling trees to reforest artificially 45,000 idle acres. . . ." Actually, the figure referred to a period from 1941 through last year, or a total of somewhat over six years.

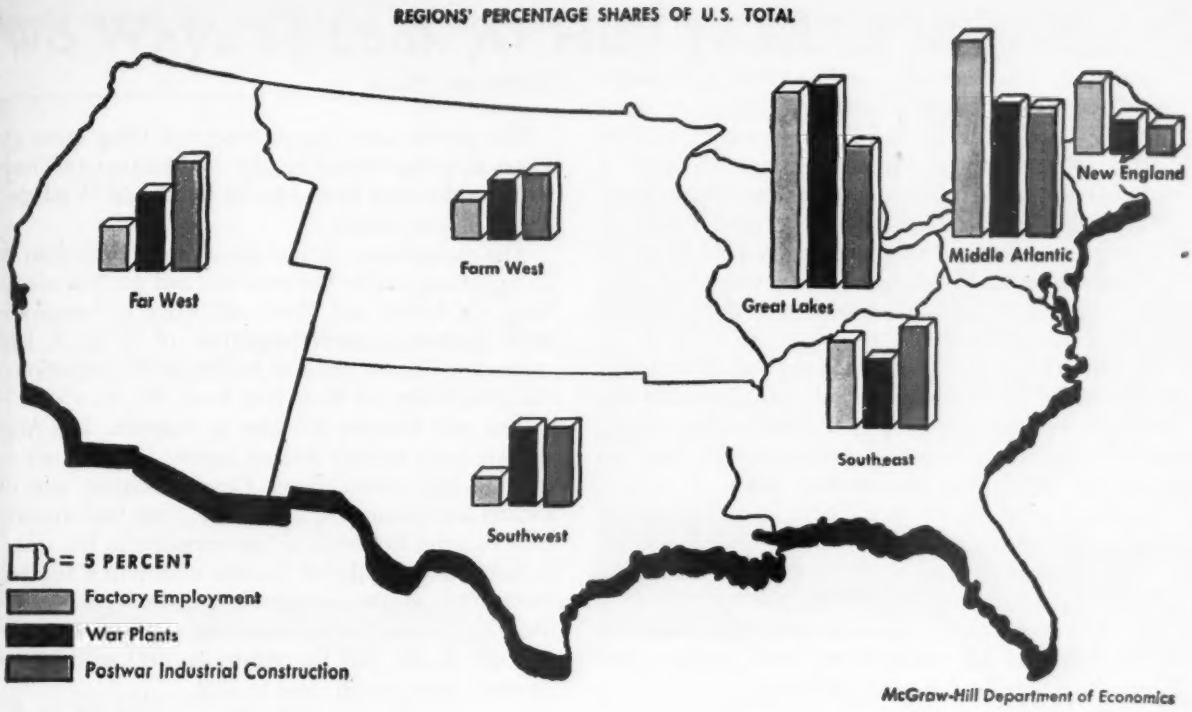
CHAPIN COLLINS
MANAGING DIRECTOR,
AMERICAN FOREST PRODUCTS INDUSTRIES, INC., WASHINGTON, D. C.

It's Norman Products Co.

Sirs:

We appreciate very much the article presenting the TWINfuel Gas-Oil Conversion Burner manufactured by us [BW—Jun19'48,p07]. Somehow, you got our company name as "Normal" where it should have been "Norman."

E. A. NORMAN, SR.
NORMAN PRODUCTS CO.,
COLUMBUS, OHIO



BUSINESS WEEK REPORTS TO EXECUTIVES ON—

America's Changing Industrial Map

A McGraw-Hill Study of the Migration of Industry in the U. S.

AMERICAN INDUSTRY today is moving across the continent at a merry pace. The rate of industrial migration since 1939 has been much faster than ever before. It hasn't slackened yet.

First it was World War II that acted as a supercharger. The Army and Navy located as many new war plants as possible far away from the Atlantic coast to lessen the chance of destruction by German bombs. This military policy meant more factories and more factory jobs for Dallas, Wichita, Des Moines, Atlanta, Kansas City, and many other points West and South.

Then the postwar industrial expansion program gave migration another boost. Postwar construction shatters the wartime record in the South and West. One-half of all new plants going up today are in those regions. They had only little more than one-quarter of all the prewar plants.

Even before the postwar building program has run its course, another factor has arisen which may keep industry on the move. This is the decision of steel and other heavy industries to shift their pricing from the basing-point method to an f.o.b. mill basis. The immediate effects of this switch on industry movement will not be great; but it's possible that big long-term changes are coming.

War-conscious America is also concerned about strategic plant locations. And efforts are being made by Washington agencies to get more industrial plants dispersed; the National Security Resources Board is now encouraging industry to decentralize manufacturing operations. This means more moving of plants.

Migration, decentralization, relocation, or movement of American industry—call it what you will—has top ranking among today's business problems and developments.

MIGRATION—BY QUANTITY

EVER SINCE the first linen mills, hat factories, and iron works sprang up around the colonial cities of Boston, New York, and Philadelphia, industry has been on the move. And significantly the move has always been from the North and East to the South and West.

Through the early 1800's, New England was pre-eminent. Then industry in the Middle Atlantic states began

to grow—and grow faster than New England's. It wasn't long until the Great Lakes states were nudging the two older regions. The lakes states made great strides through the first decades of the 20th Century.

During World War II, hundreds of new plants were spotted in new centers. Some were put in large or medium-sized cities—others in small towns. Charlestown, Ind., and Radford, Va., shared honors with St. Louis and Los Angeles. Wartime shipbuilding boomed Newport News, Charleston, Mobile, and other sleepy southern ports. The Far West swelled, too, with shipyards and with huge aircraft plants.

The New England, Middle Atlantic, and Great Lakes regions, which had 72% of all U. S. manufacturing jobs before the war, got only 55% of the new wartime plants built with private or government funds. And they are getting only 45% of the new postwar plants.

In a dozen years the nation will have boosted its factory capacity 50%. But the increase for the South and West will be almost 100%; the Northeast regions have gained only about one-third. In other words, putting one-half of the U. S.'s overall 50% expansion of industry into the South and West has made those "new" regions grow almost three times as fast as the old ones.

Two Yardsticks

Two yardsticks provide the over-all measurements of migration. One is money spent for new plant construction. The other is employment.

Money spent for new plant construction shows that the wave of migration which began before the war is in full swing and still is far from complete. During the war years, 1939-1945, almost $10-billion of private and public funds were spent for plant construction. By comparison, postwar construction totals only about one-half as much, close to $5-billion. But many wartime plants cannot or will not be converted to civilian use. And postwar expansion still has at least one year to run. It is probably fair to say that postwar expansion, when complete, will add almost as much permanent new capacity as did wartime building.

Using the employment yardstick, you find that, from 1939 to 1947, the Northeast has lost 3% of its share of total U. S. factory jobs, and the South and West have gained that much. You get that figure by using two benchmarks: (1) the last full industrial census of 1939 as one benchmark; and (2) an analysis by McGraw-Hill of Bureau of Labor Statistics figures on postwar factory jobs in 20 industries in the 48 states. The BLS figures run through April, 1947. (Figures for that month were averaged with the October, 1946, data to smooth out differences that might crop up in a single month's statistics.)

The 3% change in employment actually reflects only the wartime shift, because few new plants begun after V-J Day could have been completed and fully operating by the start of 1947. On that basis, the shift in employment during the war years checks with the estimates based on construction figures, which show a shift of 6% to 7% for the complete war and postwar migration.

Shifts Are Slow

The employment figures make one thing quite clear: Great as is the volume of new construction and impressive as is the share gained by the South and West, migration is a slow process.

The movement is almost glacial, more drift than shift. Even getting half of the total war and postwar construction, the South and West will make a comparatively small increase in their proportion of all U. S. factory workers. A dozen years of "accelerated" migration will raise their share of those jobs from 28% to about 35%.

The auto business provides an example. Los Angeles expects soon to rank second among the nation's auto-assemblying centers. Ford, General Motors, and other makers are opening big new plants there, and are driving hard to enlist hundreds of new suppliers in the area.

But Detroit will still be the undisputed leader. In 1939, 83% of the auto industry jobs were located in the Great Lakes states, centering on Detroit. And it's an odds-on bet that the census in 1949 will show that section's share is still close to 80%.

Regional Changes

The most striking findings, when you look behind the totals measuring migration, are the regional gains and losses.

Within the over-all trek of industry to the South and West from the Northeast, the story of what's happened is very different from area to area.

The answers to several questions tell that story: (1) Which industries gained or lost in a region? (2) How important is each industry to a region's total employment? (3) Is there fast growth, or not, in industries in which a region's stake may be high?

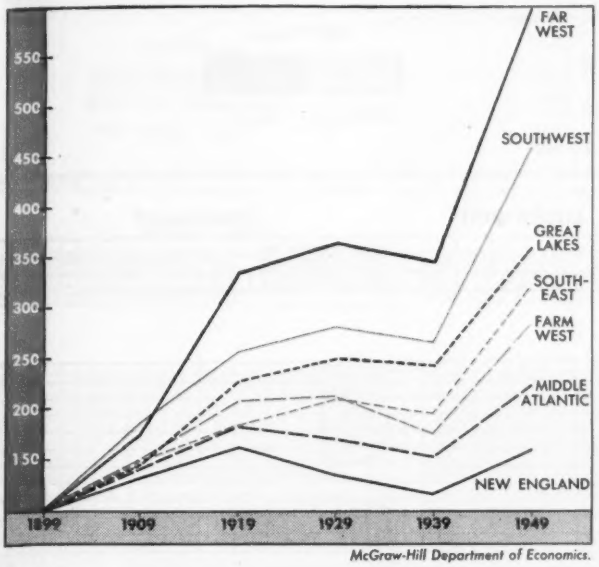
All of these and other influences are summarized in the following regional thumbnail sketches:

New England. The region's share of factory jobs has shrunk consistently for many years. It has again, since 1939, suffered the sharpest loss of any. Even its post-war industrial job total stands lower than it did in 1919.

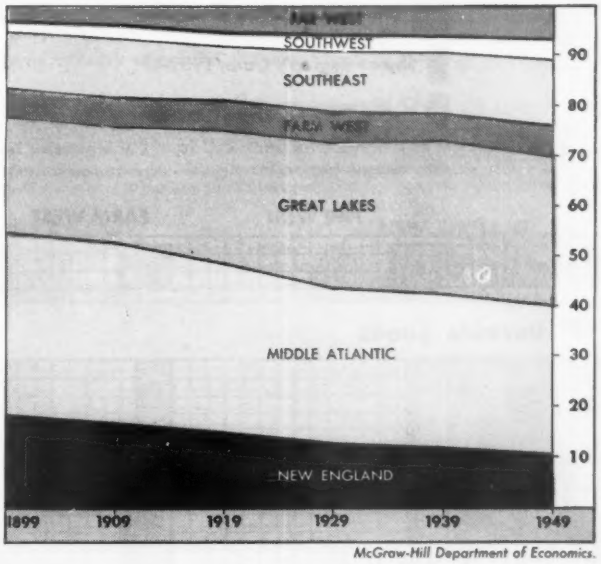
But nondurable lines have taken New England's worst declines recently. The region's shares of U. S. totals increased in three of six metal-working industries. So, within this historically soft-goods region, durable goods are winning out: They account for three-fourths of the region's over-all job gains since 1939. Should the long-rumored move to build new seaboard steel mills in the region ever pan out, it would hasten this new trend.

Middle Atlantic. This top-ranking area went over the hill—in relative terms—decades ago. In line with its history, it has, since 1939, suffered the second worst regional loss. And since only 20% of total U. S. new plants have gone to this region, in contrast to its 30% share of existing employment, you will see further cuts in its over-all shares of American industry—even if its total industry continues to grow.

Two Ways to Look At Fifty Years of Migration



McGraw-Hill Department of Economics.



McGraw-Hill Department of Economics.

Yet, in five manufacturing industries, the Middle Atlantic region's shares of the national totals have risen since 1939, and the region has held its own in two major specialties—apparel and miscellaneous products. So it's far from safe to push general trends into specific cases, even here.

Great Lakes. Until 1929—or even 1939—this region was the heart of America's industrial growth; but it has begun to slip. Its shares have dropped in 14 of 20 industries. And its proportion of new plant construction runs below its present proportional slice of total U. S. manufacturing.

Until now, the trend away from the Great Lakes has been slight but general. From now on, increasingly, the losses in regional shares will begin to appear in heavy goods industries like autos, machinery, and steel, in which the region boasts special concentration.

Southeast. The old South has forged ahead steadily in most lines over the years. But it has emphasized specialties, such as textiles and lumber—in which it again scored its biggest gains since 1939. It moved up well—but less sharply—in food, paper, rubber, and a couple of other industries. But its growth has been only near-average in a good many other manufacturing lines.

Possibly, the region's striking advances in income-per-person over the past 10 or 15 years will speed up migration in other consumer products as well. But, thus far, the Southeast allotment of new construction suggests that its over-all industrial growth will continue the moderate pace it has shown historically.

Farm West. This region has taken a new lease of industrial life during and since the war. Historically, its growth was not much above average, and after 1929 it even slipped back a little. Yet, since prewar, its shares of U. S. jobs have advanced in 18 of 20 manufacturing lines. Whereas food industries made up one-third of prewar factory jobs, they provided only one-sixth of 1939-1947 job gains. Postwar construction indicates a continued mild but general industrial advance.

Southwest. This is America's fast-growing industrial infant. Lumber, food, and oil were its prewar Big Three, accounting for over half of all factory jobs. But, by advancing in almost every industry group, the region has diversified. And its expansion, through new plant construction, is running triple the nation's average pace. However, in many lines Southwest industry is still exceedingly small—in half-a-dozen cases even less than 1% of the U. S. total.

Far West. Here is, in many ways, the nation's center of greatest growth. Gains in regional shares have been large and broad. And, while starting from a bigger industrial base, gains are running almost as sharp as in the Southwest. It's notable that postwar construction is running even faster than wartime building in the Far West. Where food and lumber made up almost half of 1939 factory jobs, they provided only a fifth of 1939-1947 expansion. Metals and chemicals lines—"war industries"—have almost trebled their jobs, and now balance food and lumber. Other manufacturing has also made strides. Lumber was the only case where the Far West lost.

Changes by Cities

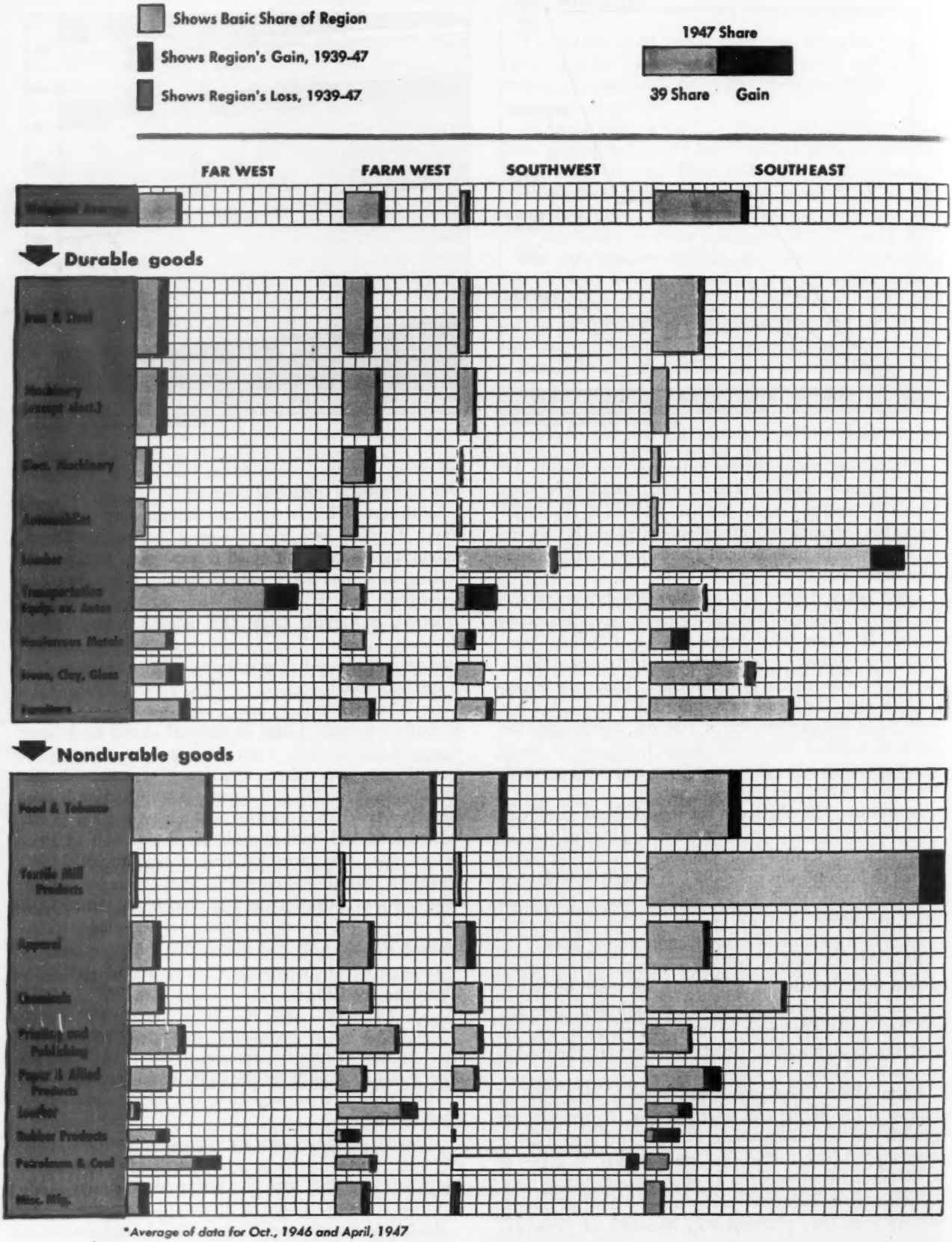
One fact about migration that is frequently misunderstood is this: Industry's movement from big cities to small is not so great as are the shifts among regions.

The emphasis is on migration, not decentralization to small towns.

Although there has been an industrial trend to smaller cities, the shift is hardly as great as it has been reported. Employment figures give the first comprehensive guide as to the size of this kind of decentralization.

Big cities have gained 45% since 1939 in the number of

How War Moved U. S. Manufacturing . . .



*Average of data for Oct., 1946 and April, 1947

. . . By Industries and By Regions

1939 Share

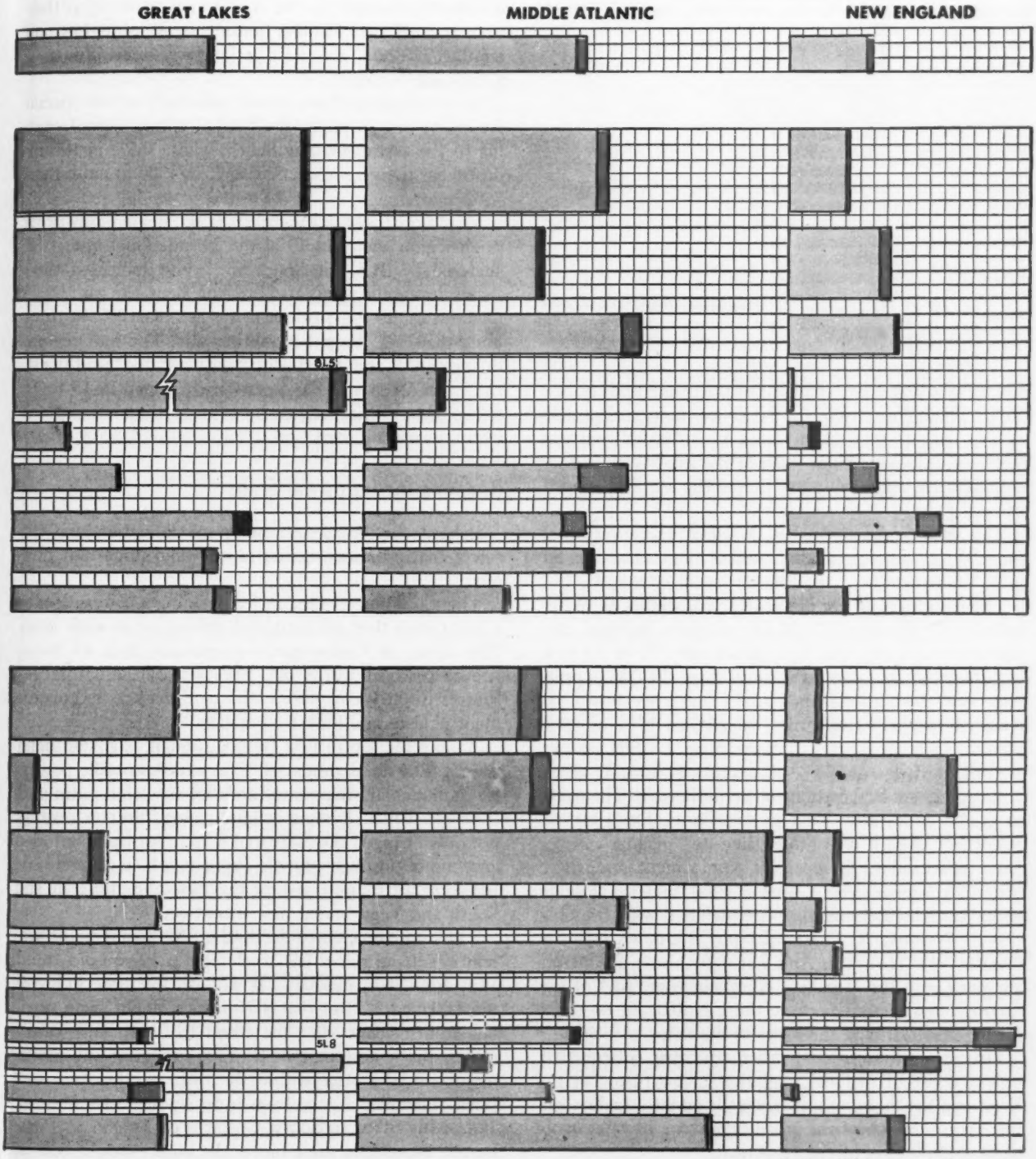
'47 Share Loss

Height of Bar Shows Importance of Industry

Represents Industry with 1,000,000 employees in 1947

Represents Industry with 500,000 employees in 1947

Each colored rectangle is 2% of U. S. total employment in the industry



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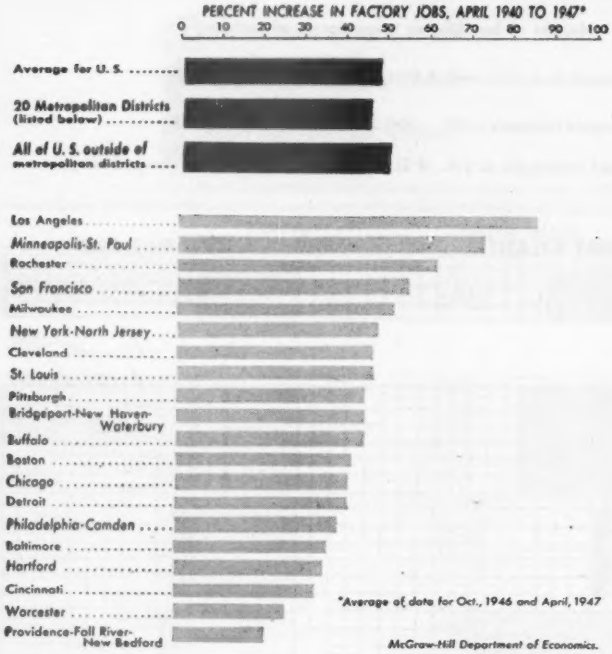
Scorecard on Migration



factory jobs they have. The rest of the country has gained 50%. These "big cities" are the 20 top industrial centers of the nation—those with more than 100,000 postwar factory employees. Their share of the total U. S. factory employment, almost one-half before the war, has slipped by only 1%.

The chart (above) makes it clear, moreover, that the changes among the big centers themselves are far more dramatic than is the big city-small city shift.

These averages do not jibe with actual studies of decentralization. *Business Week*, for example, reported last year that six companies had placed only 23 of 83 new branch plants in cities with more than 100,000 population. And the National Industrial Conference Board has reported that 148 companies, which had 47% of their prewar plants in cities with more than 100,000 people, are now putting only 34% of new plants into big cities.

But there are explanations of the difference: The move to smaller cities is stronger in some lines, like electrical machinery, than it is in others, like steel-making with its heavy investment. In reporting employment, too, there often is confusion about smaller cities that lie close to major cities; sometimes they are included with the "big cities." Newark, N. J., for example, is thrown into the Greater New York area. And, naturally, many new plants are going into the "smaller" cities which are part of the metropolitan centers because there is little or no space for big new plants in the heart of the cities.

Decentralization to small cities, moreover, is frequently only a phase of regional migration. New plants in the West and South, for example, usually go into smaller centers because much of the area has nothing like the many giant metropolises of the Northeast.

All the same, there is ample evidence that smaller cities have been industrializing at a faster rate than the biggest cities have.

MIGRATION—BY QUALITY

MIGRATION IS NOT ONLY MOVING FASTER and faster—but its character is becoming more general.

Some industries have always moved right behind the pioneers. In the early days, for example, the rifle-maker traveled hard on the heels of the frontiersman. Other industries developed on the new natural resources as they were opened up. Lumber milling in Washington, oil refining in Texas, and meat packing and flour milling in Kansas are examples.

Some industries have moved on more or less special factors. A case in point: the shift of cotton manufacturing to the cotton-growing South, whose share in the industry has risen from less than 25% in 1900 to more than 75% today.

Migration today, in contrast, is no single-industry or single-region affair. In 19 of the 20 individual industries analyzed by BLS, the South and West increased their shares during the war years. In 13 of them, the gain was a medium 2% to 5%, in three it was less than 2%, in three more than 5%. To put it another way: The four regions in the South and West—the Southeast and Southwest, the Farm West and Far West—each gained in 15 to 18 of the 20 industries, and each of the northeastern regions lost in almost all lines.

Reasons for Industrial Shifts

Behind the broadened sweep of migration are the forces that promoted earlier moves—and important new ones.

There is a host of reasons for deciding where to locate a plant, and they are weighted differently in each case. The Dept. of Commerce, for example, lists 13 Basic Industrial Location Factors. They range from natural resources through cost differentials and markets to government policies and industry practices.

Among the top in new factors, though, is government action. The development of TVA and Bonneville power, for example, laid the groundwork for new aluminum and chemical plants. Putting defense plants into new centers not only changed the industrial map in wartime, but also gave impetus to new growth. Postwar cuts in differentials between rail freight rates in the East and those in the South and West added new incentives.

The Supreme Court's decision on the basing-point system in setting prices has accelerated a 10-year-old trend away from it in industry. It will stir up more industry movement, too. But that will not—as might seem obvious at first—contradict the trend to South and West; rather, the reverse may hold. First, much of any movement will take place within the three northeastern sections—examples may be from Indianapolis to Hammond, Ind.; Milwaukee to South Chicago; or Toledo to Pittsburgh. Second, in some moves the higher freight cost of

Migration—by Industries

Iron and Steel, as an industry, has seen less migration than most manufacturing. That may appear surprising, since new ingot mills have gone up in the Far West and Southwest. Meanwhile, the Mid-Atlantic and Great Lakes states have grown less, and have lost in their shares. But iron and steel fabricating—wire, bolts, stoves, hardware, etc.—has not moved as much. The Great Lakes and New England gained; the Southwest lost.

Machinery, which more than doubled its jobs since 1939, has experienced moderate migration but unusual growth. New England and the Great Lakes states have both lost 1% to 2% of their shares; meanwhile, the South and West have gained—especially the Far West—and so has the Middle Atlantic region. Machinery jobs are still concentrated in the Northeast.

Electrical machinery has, like other machinery lines, shifted its regional shares slightly in the course of a more-than-100% increase in production since 1939. Great Lakes region has lost some 3%, Middle Atlantic has held steady, and New England has even gained. Most of the South and West now boast larger shares, and, proportionate to their 1939 positions, their growth in some cases was extraordinary.

Automobiles, with 83% of its 1939 jobs in Great Lakes states to start, naturally has migrated outwards to the benefit of all other regions, not just the South and West. Meanwhile, the Great Lakes lost 2% of its dominating share. Postwar migration has continued on the same lines, but faster.

Lumber shows one big shift: a 5% rise in Southeast shares to 39% of U. S. jobs, and a 5% Far West drop to 25%. New England and Mid-Atlantic regions gained 1% or 2% each, the Southwest lost as much, and Mid-West regions held fairly steady.

Transportation equipment has had a sharp shift. Mid-Atlantic and New England states together lost 11% of their prewar share of the U. S., while the Far West and Southwest gained 10%, with other regions fairly stable. Result: Far West pushes the Middle Atlantic for first rank—with 26% vs. 31%.

Nonferrous metals migration has followed the usual pattern, but with a more limited geographical horizon. Almost all the movement took place in regions east of the Mississippi. New England and Middle Atlantic regions each lost 3½% of their prewar jobs shares of the U. S. total. The Great Lakes and Southeast each gained 2½%. But regions west of the Mississippi picked up only 2% altogether.

Stone-clay-glass industry has experienced surprisingly little migration. Changes in all regions' shares have been small—1% or 2% at most for each. But the South has lost while the West has gained, and the Mid-Atlantic states have gained as the Great Lakes area has lost.

Furniture is following the general migration pattern from the Northeast to the South and West. Employment data suggests a 3½% shift, mainly from the Great Lakes; production figures indicate a 7% shift, with the Mid-Atlantic also losing, and Southern regions especially gaining.

Food industries as a whole move with regional income; but some of the food subindustries go their different, individual ways. Regional shares of food and income line up closely—except, naturally, for an extra big food share in the Farm West (15% vs. 10% of income). Hence the four regions of the South and West, which account for half of this industry (vs. 30% of all manufacturing), have boosted their shares by 4½% since 1939.

Textiles are still moving into the Southeast, as they have for decades past. Middle Atlantic states, which had 27% of 1939 industry jobs, lost 3%, while New England's 24% share shrank by 1%. Southeast states, with the biggest single share of the industry, also gained the most: from 42% to 46%. The Farm West, Southwest, and Far West altogether still have less than 3% of textile employment—up 0.5% from 1939. The Great Lakes held at about 4%.

Apparel trades have grown all through the South and West, their joint share of jobs gaining 3.5% from the 20% held prewar. But Mid-Atlantic states held their own —58% of the industry centering on New York City. New England and Great Lakes regions took losses.

Chemicals' huge boom everywhere since prewar times far overshadows any "migration" in the industry thus far. However, the large postwar expansion program, which puts great stress on "new" regions like the Southwest, is not reflected in 1946-1947 employment data. Regional shares of chemical jobs have shifted only slightly since 1939—a 1% Northeast loss, in Mid-Atlantic States, to the moderate gain of the South and West.

Printing and publishing is following the general trend to South and West. New England has lost particularly, the Far West and Southwest have benefited most.

Paper and paper board growth since prewar has shifted over 4% of the industry share. All the Northeast regions, which accounted for 77% of prewar jobs, suffered shrinkage in their shares of U. S. totals; the South and West expanded by more than one-half.

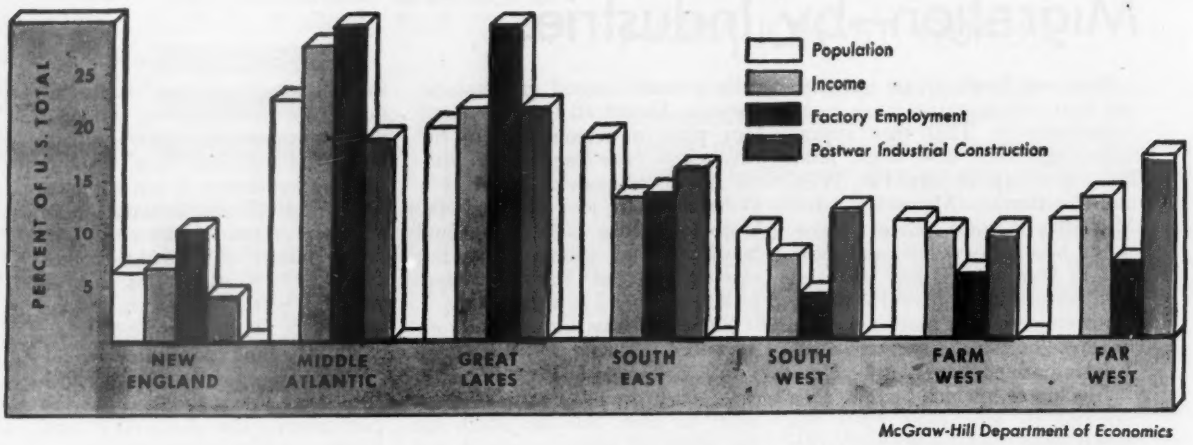
Leather shows a new migration pattern. In the 1920's and early 1930's, the industry shifted rapidly. Since 1939, however, migration has been slower but broader. The four regions of the South and West ran their shares of U. S. jobs up from 16% to 21.5%. New England lost most, the Great Lakes least, and Mid-Atlantic stood still.

Rubber products show one of the most dramatic shifts of any industry. The Great Lakes states have held their big 52% prewar share. But from 1939 to 1947, New England's share has dropped from 22% to 17%, and the Mid-Atlantic from 19% to 15%. The Southeast has trebled its 1.4% share to 5.1%, and the Farm West its 1.1% to 3.9%. The Southwest's infant share zoomed from 0.1% to 0.5%. The Far West is up from 4.5% to 6.1%.

Petroleum and coal products present an anomalous migration picture. Employment shows one major shift—a Far West gain and Great Lakes loss of 4½%. But oil refining—two-thirds of this small industry—left all regions' shares steady.

Miscellaneous manufacturing—a catch-all of products, ranging from buttons to scientific instruments, was 90% concentrated in three Northeast regions, with the Mid-Atlantic states boasting a full 50% share. Now all the southern and western regions have gained—a combined 3% rise—especially at the expense of New England.

Migration Versus Markets of the U. S.



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steel may be just the final reason for relocating—say, from Bridgeport, Conn., to Birmingham. Third, steel mills can move nearer their customers as well as vice versa, so western regions that don't have many steel mills now may gain.

More important than government action is the great change in consumer markets. The regions in the South and West have increased their share of U. S. income from 38% to 44% since 1939.

That increase is much larger than the region's wartime gain—from 28% to 31%—in their share of the nation's industry. So the West and South came out of the war with less industrial capacity, relative to their consuming markets, than they had when war began.

The Far West states saw their populations grow spectacularly, of course. But even more important was a healthy gain in per-capita income in the other regions of the South and West. By the size of increases in income, the regions rank this way: Far West, Southeast, Southwest, Farm West, Great Lakes, Middle Atlantic, and New England.

Differentials in costs between the regions have changed, but much less abruptly than consumer markets. Since prewar, the Interstate Commerce Commission has boosted freight rates 12% more for eastern than for southern or western manufacturers in many lines.

Wage differentials, on the other hand, show no such narrowing. Bureau of Labor Statistics studies show little change in average wage differences over the last 15 years. The Far West still runs some 15% above, and the South some 15% below, par for the Northeast and Middle West. Detailed studies, however, show some southern industries paying above, and others below, the national average—with the differentials shrinking as each low-pay or high-pay industry grows. The biggest boon for the fast-growing regions, in labor matters, has probably come from the wartime training that built up skilled, efficient labor forces and so cut costs.

Not all industries or regions are affected by these forces in the same way. They are, after all, only a few of the factors governing location of industry. But the trend toward more general migration—and the forces behind it—are unmistakable.

Creating a Circle

Migration, too, particularly in the broader pattern, has a way of feeding on itself. New automobile assembly plants, for example, may be located in Atlanta or Los Angeles because markets there are growing, trained labor is now available, parts suppliers have grown up in the area, and freight rates are changing favorably. But, once the plants are built, they themselves attract new makers of parts and supplies. And that enlarges the local or regional market for steel and other materials, for building materials, machine tools, and the whole range of industrial equipment.

The circle expands again when the new industrialization attracts new workers to the area, increases the population, and raises incomes. That widens the market once more.

In years ahead, a new emphasis may be given migration and decentralization as the U. S. prepares against the possibility of atomic warfare.

But even without that incentive it is easy to predict that the new, more general migration, feeding on itself, will forge ahead for some years to come. Industry is marching with a new momentum.

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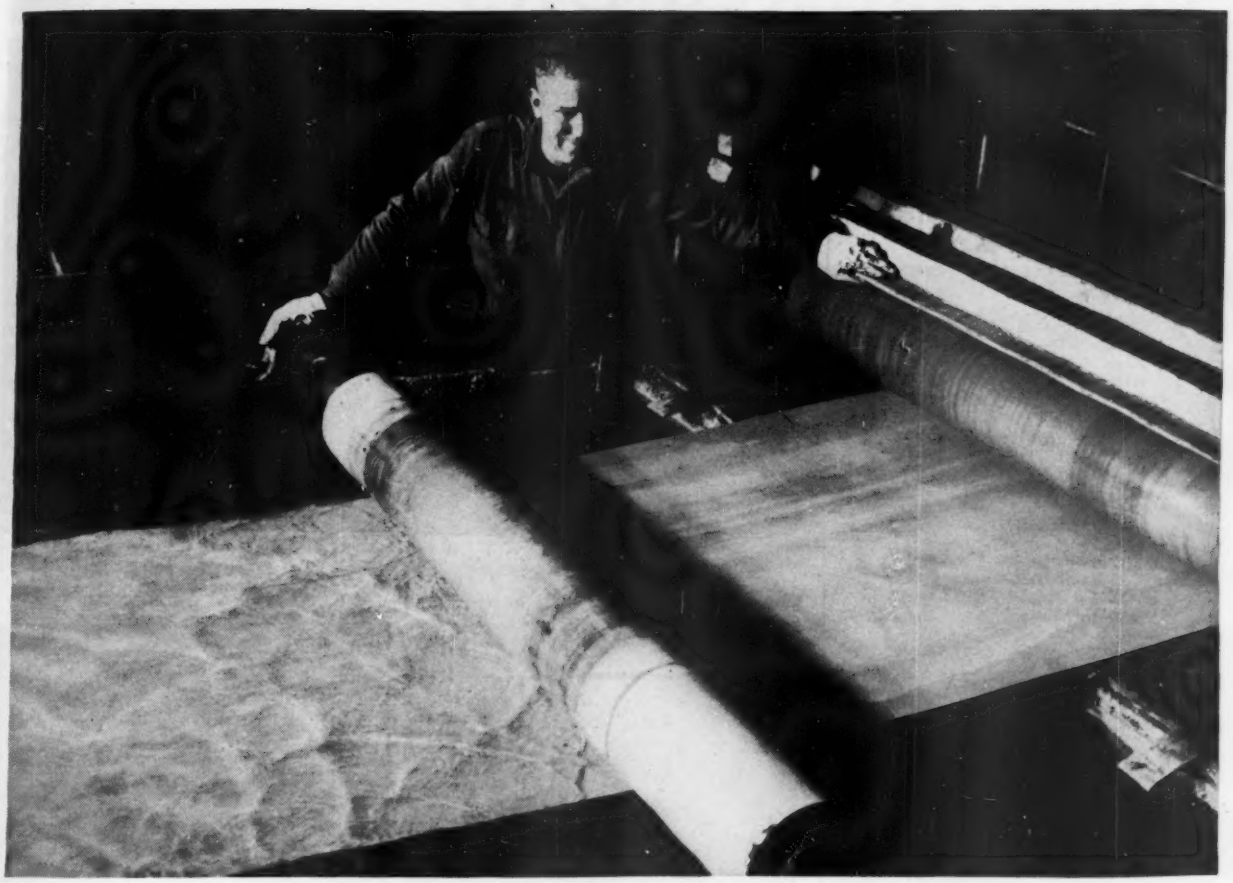

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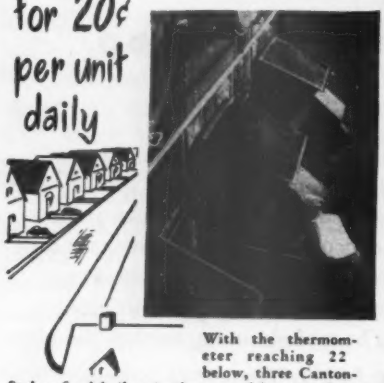

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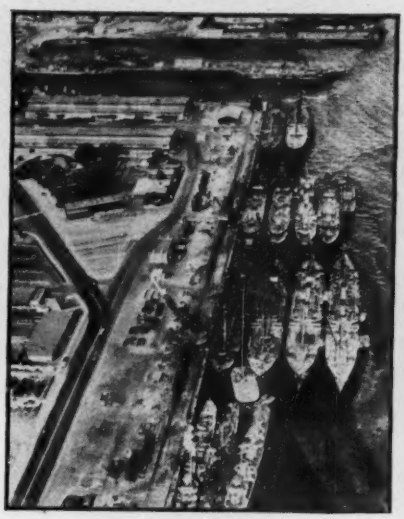
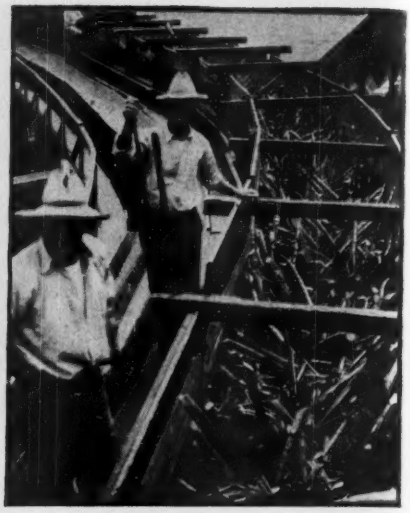
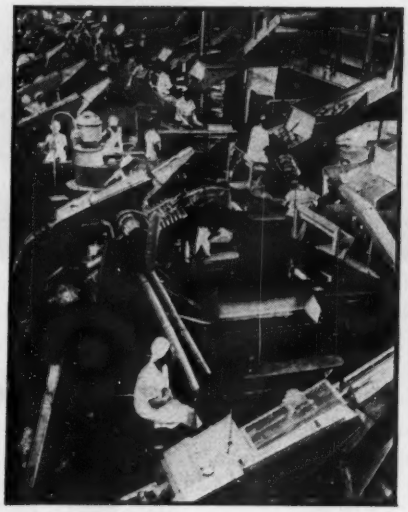
REGIONS



Military payrolls . . .



Sugar . . .



Pineapples and . . .

Tourists are . . .

Four Props to Hawaii's Economy

But they may not be enough any more. Islands' population is much higher than prewar; new income sources are needed. Drive is on to boost tourism; fishing, flowers, fruits, nuts could contribute.

Six times a day planes lift their wings from the West Coast of the U. S. and head out across the Pacific Ocean. Nine hours later they come to rest at Honolulu. Each week Pan American Airways and United Air Lines carry 1,000 people from the mainland to the land of sugar, pineapple, and enchantment. Last year, they and other civilian and military planes carried 100,000 passengers west.

• **Anniversary**—More than any other factor (save perhaps the war), that trip-hammer regularity of air service has cemented the bond between the U. S. and the Hawaiian Islands. Next week the islands celebrate the golden anniversary of that marriage. In the 50 years since the American flag was hoisted over the Territory of Hawaii, the islands have given the U. S. cause to celebrate the union too:

THOUGH DENIED STATEHOOD, the islands pay more federal taxes than any of a

dozen states ($108-million in the fiscal year just ended).

THOUGH SEPARATED FROM THE MAINLAND by 2,000 miles of water, Hawaii is closer to San Francisco than is New York.

THOUGH PREDOMINANTLY ORIENTAL in culture, temperament, and custom, the islands are in spots more occidental than Times Square.

THOUGH PRIMARILY AGRICULTURAL, the territory is an incubator for processing and materials-handling techniques, and for aggressive labor relations.

• **Upheaval**—The Hawaii of 1948 is a territory in transition. The permanent civilian population rose to 528,400 this year; that's almost 25% higher than the 1940 census figure.

From one of the least unionized areas in the U. S. in 1945, Hawaii became, by 1947, one of the greatest. Bank deposits have tripled. Hawaii became and remains one of the highest living-cost areas in the U. S.

• **Top Industry**—Fifty years ago, when the Republic of Hawaii was incorporated as a U. S. territory, sugar was the backbone of the economy. It is still vital: By the dollar yardstick, sugar now ranks second only to the armed services; its 1947 sales volume was $108-million, compared with 1947 military payrolls of $147-million.

But sugar people aren't happy (BW—Jun.12'48,p46). In fairly rapid succession, the years since the war have brought lower production, labor wrangles, high labor costs, and now unsteady sugar prices—each a challenge to the planters' ingenuity.

• **Second Industry**—Pineapple growers and canners are more optimistic. With demand still far beyond supply, their 1947-1948 volume is well ahead of last year's $70-million. Leaders of this No. 2 industry are ranging far afield with their plantings—to Cuba, Mexico, and the Philippines—to maintain their dominance (BW—Jul.17'48,p34). This pinpoints a problem common to pineapple and sugar men: There just isn't enough suitable land in the islands to permit much local expansion.

How, then, do you support the additional population? To find out, Hawaii's businessmen created the Hawaiian Economic Foundation (with big-time stateside personnel). Their answer: tourism.

• **Growing Industry**—The trumpeters of Hawaii's virtues believe they can build annual tourist income tenfold, to within arm's length of sugar. The Hawaii Visitors Bureau doesn't shrink from the task. The bureau is sweetening the promotional bait from $175,000 this year to $500,000 next. Both public and private treasuries will have to dig.

In the bureau's favor is the ambition of most mainlanders, rich and poor, to see the islands at least once. At first, G.I.'s who served or passed through

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there were sour; they associated Hawaii with the worst features of wartime discipline and civilian congestion. Now, eager for a peacetime look, they are among the island's best salesmen.

• **Seasonal Factor**—One aim of the Visitors' Bureau is to level out the peaks and valleys of seasonal travel. Stunts like a $10,000 open-golf tournament in the fall, and an Aloha Week of Pageanty in November, were conceived for that purpose. Year-round temperatures in the 70's are stressed.

A hotel planning committee sees a need for 1,259 new guest rooms by 1952, most of them on the outer islands. Matson Navigation Co., which operates the plush Royal Hawaiian Hotel, at Waikiki, is putting $850,000 into 100 new rooms at the neighboring Moana, a moderate-price hotel. Another 400 rooms to cost around $1¾-million are either under construction or on the drawing boards.

• **The Big Four**—In the broad sense, all this adds up to the fact that the Hawaiian economy rests on four legs—the military services, sugar, pineapples, and tourism. These bulk so large that many smaller but important industries are obscured.

Take fishing. Congress appropriated $1-million this year for research into our Pacific fish resources. This research is to be based at the University of Hawaii. At congressional hearings, estimates of the potential commercial volume ran as high as $200-million a year. Hawaiian Tuna Packers, Ltd., employing 450, is back to prewar production, with an estimated 1948 catch of 13-million lb., worth more than $4-million.

• **Minor Industries**—On the exotic side are flowers, papaya, and macadamia nuts. Flowers in Hawaii are as abundant as sand on the beaches. Exporting orchids to the mainland is a $1-million business for Crossley Associates, Flowers of Hawaii, Ltd., and Nuuanu Orchid Garden. Thanks to the airlines, they can deliver a lei of fresh Baby Vanda orchids in New York for $7.50.

Acreage in papaya trees is twice prewar size. The territorial Dept. of Agriculture says that the papaya, a meaty tropical fruit eaten like a cantaloupe, is about where the pineapple was 20 or 30 years ago. As sugar planters abandon more and more acreage that is marginal so far as cane is concerned, papaya planting may be expected to grow from its present 552 acres. Growers also have an eye on the fresh-frozen market.

Macadamia nuts are a luxury product of the islands. They command a retail of close to $3 a lb. New types of trees, which yield three to six times greater volume than present varieties, may make the Macadamia competitive with the almond and the filbert.

• **Byproduct**—Another minor industry that has aroused the interest of big busi-

COMMERCIAL FISHING is one of Hawaii's biggest "little" industries

ness is the manufacture of insulation board (Canec) from the residue of sugarcane milling. Hawaiian Cane Products Co. last year produced 100-million board feet of the stuff.

This year Flintkote Co., of New York, took over Hawaiian Cane in a $2.5-million stock trade. Now Flintkote is marketing Canec with its line of building and roofing materials. Expansion possibilities are almost limitless as far as raw materials are concerned; only a small amount of the sugarmill waste fiber is now being used.

Other industries with sizable volume or prospects are coffee growing, lumbering (koa and ohia, hardwoods), truck farming, curios, perfumes, and Hawaiian clothing and beach and sports wear.

• **Trade**—Retail sales on the islands last year were $472-million. This year they were $19-million ahead of that pace at the halfway mark (but wholesaling was $25-million behind). Sears, Roebuck & Co. has just spent $1-million to remodel its Honolulu store. The exclusive McInerny department store put another $1-million into one of its two buildings. Montgomery Ward and National Dollar Stores are expanding.

• **Steps Forward**—Three developments within the past year have helped destroy the resented assumption of mainlanders that Hawaii is a "foreign" land.

(1) Congress passed and the President signed a bill ending the need for export declarations on goods shipped between Hawaii and the mainland.

(2) Immigration and Customs have taken some of the pain out of their check of air travelers from Hawaii by shifting the check point to Honolulu airport just before takeoff, instead of

How much do you know about *Asbestos?*

In 1905, this building (Ambler, Pa.) was roofed with K & M *Asbestos*-Cement Shingles, the first in America. After 43 years the original shingles are still in use.

A $3,000,000 fire swept Ocean City, N.J. in 1927. This sketch (taken from a photo) shows how K & M *Asbestos*-Cement Siding withstood the blaze, protected the frame buildings beyond.

New England's 100-mile hurricane of 1938 picked up this house, tossed it, bounced it, rolled it for a quarter of a mile. Its K & M *Asbestos* Siding was unharmed by the treatment!

You hardly expect your house to be bounced like a tennis ball . . . but you do want it to endure. You hope your home will never catch fire . . . but it's comforting to know you're protected by fire-resistant siding and roofing!

Those are just two of the many advantages of K&M "Century" Asbestos-Cement Roofing and Siding. This tough material *won't* crack or curl, *can't* burn, *can't* rot, never needs painting for protection. It has a deep-grained, weathered finish, full shadow lines and will easily outlast the life of the house.

If you're planning a new home or improvements to your present one, "Century" Asbestos-Cement Siding is your best bet for beauty, utility and economy. Write us for complete descriptive material.

Nature made Asbestos . . .

Keasbey & Mattison has made it serve mankind since 1873

DIAMOND ANNIVERSARY 1873 1948 K&M KEASBEY & MATTISON CO.

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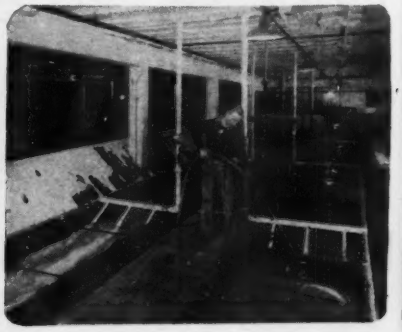
4 common conditions where *WOLMANIZED PRESSURE TREATED LUMBER protects against DECAY and TERMITES

Wherever moisture is condensed in wood because of concrete or masonry contact, as with sills, sleepers, door and window bucks, wall plates and columns.

Where outdoor structures are exposed to ground moisture, rain and snow, such as stadium seats, boardwalks, loading piers, coal trestles, railroad structures.

When wood is used in or near the ground subject to attack by decay and termites, such as foundations, joists, fences, telephone poles and guard rails.



Where steam, vapor and dampness from industrial processes are prevalent, such as process moisture, refrigeration, air conditioning and humidification.

This PROVED Protection COSTS LESS Than Replacement Labor

Actual service records prove that "Wolmanized" lumber outlasts ordinary wood by as much as 3 to 5 times. That's because it is pressure-treated with special chemical salts to give lasting protection against wood-decay and termites.

And the extra cost of using Wolmanized lumber in the first place is actually less than the cost of replacement labor alone, on wood which has failed prematurely.

Here is true economy which will reduce your maintenance costs and give you sounder buildings. It offers you particular savings under conditions such as those shown above where wood is subjected to moisture and ground exposure—ideal conditions for decay and termites.

Wolmanized lumber is clean, odorless, paintable and non-corrosive to metals. Write today for full information.

Learn more about this money saving pressure-treated lumber

Get all the facts and figures on how Wolmanized pressure treated lumber resists decay and termites.

Write today for this new booklet.

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Boston 9 New York 17 Washington 5 Jacksonville 2, Fla.

Portland 5, Ore. Los Angeles 15 San Francisco 5

delaying travelers after arrival on the West Coast.

(3) United Air Lines has set up a Honolulu-to-New York schedule that puts Honolulu within 24 hours of the East Coast.

• **The 49th State?**—A fourth development—the one that got away—is statehood. No public issue in recent years has stirred the people's imaginations and passions as has the proposal to make Hawaii the 49th state. The pros and cons are weighted with logic and idealisms. In the islands the pro partisans seem to predominate.

But underlying the debate is the question whether Hawaii's polyglot population is politically mature. Put it another way: By racial antecedent, the population is roughly one-third Caucasian, one-third Japanese, and one-third assorted Hawaiian, Filipino, Chinese, Puerto Rican, and Korean. The orientals in the sugar and pineapple industries have proved highly susceptible to the organizing campaign of the left-wing C.I.O. longshoremen's union. Given a vote in national elections, would they be equally susceptible to left-wing politicians?

Nobody knows the answer to that one. But it's a safe bet that undertones of the question will be audible when a Senate committee conducts statehood hearings in the islands in November.

Underwater Artery

This black tube will some day roar with the sound of traffic between two boroughs of New York City: Brooklyn and Manhattan. It's part of the $77-million Brooklyn-Battery tunnel, the biggest underwater tube in the nation. Engineers expect the tunnel to be ready for traffic in the spring of 1950. Over 2,000 men are now at work on it.

Calmer Waters

Upper Basin states agree on division of their Colorado River water. Move paves way for big improvement program.

A welcome calm settled over one part of the turbulent Colorado River waterfront last week. And ultimate peace in the seven-state river feud (BW –Jul.10'48,p32) came a long step nearer: The Upper Basin states agreed on how to divide their share of the waters. (Upper Basin states are Colorado, New Mexico, Utah, Wyoming; Arizona, mainly in the Lower Basin, falls partly in the Upper Basin area.)

• **No Agreement, No Improvement**—By the terms of the Colorado River Basin Compact—one of the basic "laws" controlling use of its waters—the Upper Basin states must let down 7.5-million acre ft. a year for the Lower Basin, may keep the same amount for themselves. (An acre-foot is the amount required to cover one acre with one ft. of water.) But the Upper Basin states had never agreed on how to divide their share.

After the war this hitch resulted in a Bureau of Reclamation ultimatum: No more upriver projects until the states did agree.

• **Settlement Firms**—That holdup—and the fear that Lower Basin California would begin to claim the water for its development—spurred the squabbling states to a settlement. So representatives met at Vernal, Utah, to add up their claims. After two weeks of rag chewing, here's how they divided the water. Arizona gets a flat 50,000 acre-ft. Of the rest, Colorado gets 51.75%; Utah, 23%; Wyoming, 14%; and New Mexico, 11.25%. The total acre-ft. allotted comes to roughly 8,164,000 acre-ft.—including Arizona's 50,000.

The total is more than the 7.5-million acre-ft. allotment. But that's all right. Water used in irrigation doesn't all stay in the fields. Some of it flows back into the river.

Now the new compact must be drawn up, O.K.'d by the state legislatures and Congress. Then, and only then, will Reclamation's $2-billion improvement program start rolling.

• **Competition**—A single instance will show why the states are on tenterhooks about the water:

Recently Hercules Powder Co. was ready to plunk down a $6-million ammonium nitrate plant in Salt Lake City, Utah. The city had everything Hercules wanted—except enough water. It couldn't be sure of that till Utah's Deer Creek project, held up by the Upper Basin's squabbling, gets under way. So Hercules moved on to California.

6 WAYS TO COMPLETE THE STATEMENT—

"Our products need—

LOW-COST PRODUCTION

ELECTRICAL STRENGTH

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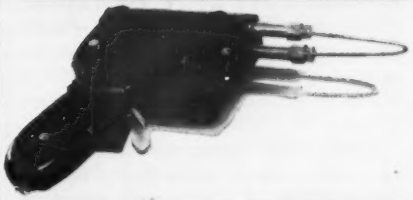
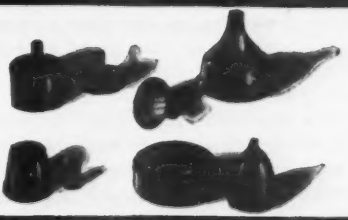


HEAT RESISTANCE



CHEMICAL RESISTANCE

SPECIAL PROPERTIES

DUREZ phenolic plastics have a spread of properties that make them ideal for unlimited industrial and resale products. Some are shown in these six highly successful applications. Each of them is unrelated to the others in the combination of mechanical, electrical, and chemical values the manufacturer required. One or more of these materials may well match *your* needs today.

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LOW-COST PRODUCTION Excellent moldability is a cost-reducing characteristic of all Durez compounds. Here a general-purpose compound with every requisite . . . light weight, self-insulation, and attractive surface lustre . . . is used for a one-piece radio housing.

ELECTRICAL STRENGTH Automotive distributor caps are among the many applications requiring the high electrical resistance of this Durez group.

IMPACT STRENGTH In heavy-duty industrial applications such as telephones, camera cases, and machine parts, Durez combines mechanical strength with excellent wear resistance.

HEAT RESISTANCE Use of Durez for welding-gun housings demonstrates the efficacy of the heat-resistant phenolic compounds.

CHEMICAL RESISTANCE High resistance to alcohol, solvents, and many other chemicals makes certain types of Durez best for closures and other packaging applications.

SPECIAL PROPERTIES Success in rayon processing equipment parts, acid pump impellers, automotive water pumps, and marine pump housings suggests consideration of Durez wherever special properties are needed.

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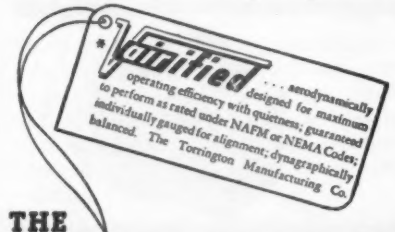
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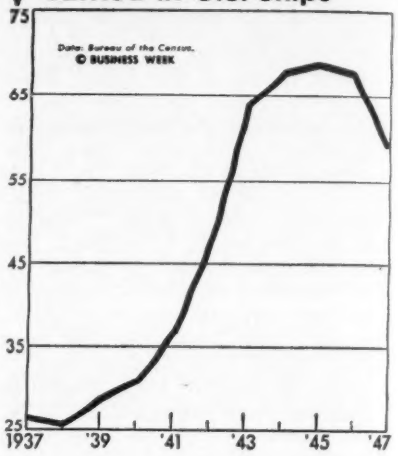
FINANCE

Merchant Marine in Doldrums

The U. S. cargo fleet is shrinking along with its overseas business. It's the old story: Foreign ships do it for less. Shipowners want a bigger handout from the Maritime Commission and ECA.

The U. S. Merchant Marine—built up by the war into the largest fleet in world history—is becalmed. The chart shows what's happening. In 1939 the U. S. handled only 29% of the nation's overseas trade. The way things look now, it's only a matter of time before the merchant fleet will be back in its prewar position.

Percent of U.S. Trade Carried in U.S. Ships



• **Earnings Down**—This is sad news not only for U. S. mariners, but for investors as well. This week United States Lines reported that earnings for the first half year were down to $610,170, or 39¢ a common share, from $5,396,822, or $3.59 a share, a year earlier. As shareholders waited for reports of second-quarter profits of other lines, prospects were slim that they would be much, if any, better than for the first quarter—when earnings took a big drop from a year ago.

For instance, American-Hawaiian Steamship Co. earned 40¢ a share on its common stock during the first quarter of 1948, compared with $1.01 in the same period last year. Atlantic Gulf & West Indies Steamship Lines ran a deficit of 52¢ a share for the first quarter this year, as against earnings of $1.63 in the first quarter of 1947. American Export Lines, Inc., dropped from $1.06 to 45¢ for the same periods.

• **The Old Story**—The reason for this unhappy sag in business and profits is the same old one that's been plaguing the U. S. Merchant Marine for years: It costs more to build and operate vessels here than anywhere in the world.

So U. S. importers and exporters use foreign ships. Why not? It's cheaper to ship cargo that way. But this raises, inevitably, a second question: Why, then, have a U. S. merchant marine at all?

• **National Defense**—The answer has been given by the advisory committee appointed by President Truman to draw up a program for developing the peacetime merchant marine: It's national defense. In both world wars we had to build up a vast merchant marine at great expense. We might not have the time to do it again in case of another war.

The committee came up with its blueprint for the merchant marine last fall (BW—Nov.29'47,p21). It recommended (1) construction of highspeed passenger and cargo ships by private lines, with the aid of government subsidies; (2) lighter tax burdens for shipowners (one way would be to make reserve funds tax exempt).

• **Going Begging**—Congress played ball during the last session by appropriating $94-million for subsidizing ship construction in the 1949 fiscal year, which began last month. And it also extended the period (until Sept. 30, 1948) during which the $84-million left over from the 1948 fiscal year will be available.

So far, this $84-million for construction hasn't been taken up by the shipping lines. They don't think the terms are generous enough.

• **Offsetting Costs**—Under the Merchant Marine Act of 1936, the Maritime Commission was authorized to subsidize shipbuilding—but only enough to offset lower shipbuilding costs abroad.

Suppose it costs an operator $5-million to build a ship in this country, and the commission estimates it costs $4-million to build a comparable ship abroad. The commission would then pay the operator $1-million, 20% of construction cost.

• **Commission's Policy**—In return for this subsidy, the operator agrees to maintain specified standards of service on certain routes, and to split profits over 10% with the government. Under

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This advertisement is not a basis for negotiation. War Assets Administration reserves the right to consider all proposals in the light of the applicable objectives of the Surplus Property Act and to reject any or all bids. Transfer of title will be subject to Executive Order 9908 relative to fissionable materials.

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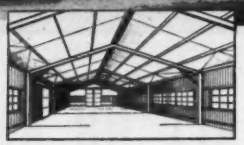

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This is under no circumstances to be construed as an offering of these Shares for sale, or as an offer to buy, or as a solicitation of an offer to buy, any of such Shares. The offer is made only by means of the Offering Prospectus.

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Common Stock Without Par Value

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Harris, Hall & Company (Incorporated) | Bacon, Whipple & Co.

July 27, 1948.

these terms, 12 shipping lines are now being subsidized.

The maximum subsidy allowed under the Merchant Marine Act is 50% of construction cost. But any subsidy of more than 33⅓% requires the approval of four of the five commissioners. Last summer the commission was allowing less than 30%, and last winter a little over 30%.

• **No Ships**—The subsidized operators feel that the construction subsidy should be upped to the maximum 50%. The President's advisory committee agreed with them in its report last fall. However, Congress didn't act on this. So the subsidized operators haven't been building new ships.

Under the Merchant Marine Act, new ships could be built at government expense and then chartered or sold to U. S. operators to be used on essential trade routes. But the Maritime Commission is opposed to this. It feels the subsidized lines are in good financial condition. A recent report to the President from the commission and from Secretary of Defense Forrestal stated that the aggregate net worth of the 12 presently subsidized operators is more than six times their aggregate net worth in 1937.

• **Bulk Cargo Off**—Meanwhile, the U. S. cargo fleet is dwindling. At the beginning of 1948, the U. S. dry-cargo fleet was 17.5-million deadweight tons (in other words, carrying capacity). About 11-million tons of this was government-owned, chartered by private companies. Since then, the chartered fleet has been reduced at an average rate of about 75,000 tons a month, according to the Assn. of American Ship Owners. Now our dry-cargo fleet stands at about 13-million tons.

Reason: These chartered ships carried bulk cargo, and our bulk exports have dropped. For example, U. S. coal exports have fallen off fast this year as European output has recovered. Originally the Marshall Plan countries estimated they would need 41-million metric tons of U. S. coal this year. Now it looks as if our coal exports would be about 20-million metric tons.

• **Foreign Flags**—Another reason why the U. S. fleet is vanishing: To escape the higher operating standards—and therefore costs—of U. S. ships, some American shipowners have transferred their vessels to foreign flags. The number of such ships has increased since before the war. In 1939, 70 dry-cargo ships totaling 320,000 deadweight tons, and 199 tankers totaling about 1.9-million tons, were owned and operated under foreign flags by U. S. companies and their affiliates. Nearly half of these ships were then under the British flag.

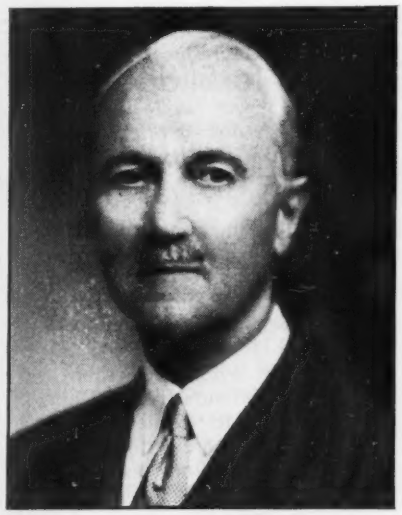
Today, about 95% of U. S. vessels under foreign registry are listed with Panama or Honduras. These two coun-

tries now have 93 U. S.-owned dry-cargo ships totaling 600,000 deadweight tons, and 121 tankers totaling 1.8-million tons.

• **Congress Under ECA**—Shipping of U. S. goods under the Economic Cooperation Administration has not yet gone into high gear. The law states that half of the volume of goods purchased under ECA shall be carried by American ships, if they are available "at market rates."

American operators say that "market rates" should be interpreted to mean rates at which they can make reasonable profits, in spite of their higher operating costs. Foreign shipowners want "market rates" to be interpreted as world rates, which are now much lower than American operators can afford. So far, ECA seems to accept the American operators' view.

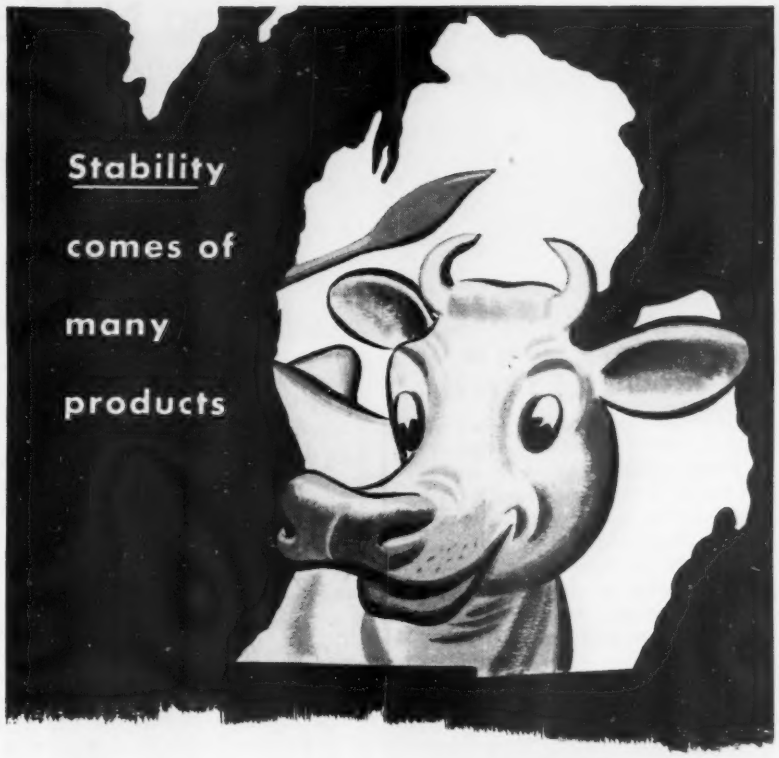
ECA has set up no way of enforcing the 50-50 division-of-cargo rule. American shipping executives charge that several Marshall Plan countries have already violated the rule. They say that these countries have postponed applications for ECA financing of certain purchases until those shipments have already been delivered to the home country by its own ships.



In World Bank Post

Grant Forbes, international banker from Boston, was named last week to a new World Bank job: Liaison officer between U. S. and European officials handling the European Recovery Program.

Forbes has had a broad background in international law and finance. He was counsel for an international finance group in Paris from 1911 to 1919, and later was European partner for Blair & Co., New York investment house. Recently he has been a consultant for the Export-Import Bank. On his new job he will make his headquarters in Paris.



She's not so Bossy in Michigan!

Sure, dairying is big business in Michigan—*but so are a lot of other things.*

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Pleasing Nobody

Annual financial reports are too technical for ordinary stockholder, not full enough for professional, survey shows.

U. S. industry has gone to a great deal of expense to brighten up its annual corporate reports, make them more readable. But judging from a survey just completed, it looks as though a lot of this money has gone down the drain. By and large, the reports please neither the "amateur" stockholders nor the professional investment people.

The survey, made by Elmo Roper, was a nationwide study of opinion among stockholders about the annual reports sent them. Roper did the job for the Controllership Foundation, Inc., a research group maintained by the Controllers Institute of America.

• **Upsetting Facts**—Here is what the survey disclosed:

As many as 90% of all stockholders sampled couldn't even remember receiving an annual report last year.

Another 7% flatly declared that they had never received one.

Some 40% appeared to have got nothing whatsoever out of the reports they did receive (25% admitted that they never read such brochures; the rest stated bluntly that the reports were of no value at all to them).

• **Dividends Count**—Roper also found out that over half the stockholders interviewed aren't interested in—or can't understand—detailed statistics, or even the elementary accounting terminology used in the reports.

This is particularly true where the run-of-the-mill stockholder is concerned. The survey shows that he is primarily interested in (1) the size of his dividend check, and (2) whether his company is in good enough shape to protect his investment and pay the same—or bigger—dividends.

• **Frightened Off**—The rank-and-file stockholder is frightened off by the "full reports" that have been so popular lately. His interest in them ranges from cursory attention to complete boredom—even where the reports are well-written and colorfully dressed up. To the 27% who are willing to make known their specific complaints, the new-style reports are criticized as "not interesting," "too long," "difficult to understand," "too complicated."

Behind this, of course, is the lack of

Hollywood Earnings Continue to Slide

Rising costs, shrinking theater audiences, and contracting foreign markets have been squeezing Hollywood earnings for some months (BW—Dec.6'47,p94).

• **Faster**—Lately the pinch has really hurt. As the tabulation below shows, profits of many leading movie companies have now skidded to as much as 89% below their levels of a year earlier.

None of this has surprised Wall Street; for a long time now, the stock market has been bearish on movie shares. That's why, as a whole, that group is selling at levels some 55% under its 1946 bull-market high, compared with the drop of less than 15% in the Dow-Jones industrial stock price average.

• **Good Shape**—Hollywood had no illusions that its lush profits would last forever. So it's in good shape now to withstand even an extended earnings drought; it held on tight to most of its recent record-breaking earnings. And not until its finances reached their strongest position in history did Hollywood start sharing its prosperity with stockholders.

The movie industry is taking steps to keep its finances strong. Production costs are being slashed; so are payrolls, and many dividend rates.

Here are the figures showing how much profits have dropped (000 omitted):

	1948		1947		% Drop in Profits 1948 vs. 1947
	Gross Revenues	Net Profits	Gross Revenues	Net Profits	
Columbia Pictures (1)	NA	$855	NA	$2,935	70.9%
Loew's, Inc. (2)	$140,443	4,729	$141,486	10,905	56.6
Paramount Pictures (3)	44,553	7,760	45,533	9,522	18.5
Radio-Keith-Orpheum (3)	27,768	1,345	31,632	2,271	40.8
Republic Pictures (4)	NA	237	NA	656	63.9
20th-Century-Fox (3)	44,408	2,927	50,911	5,898	50.4
Universal Pictures (4)	NA	233	NA	2,092	88.8
Warner Bros. (4)	79,146	7,311	88,177	14,014	47.8

(1) 39 weeks ended Mar. 27. (2) 40 weeks ended June 3. (3) First quarter. (4) First six months of 1948 and 1947 fiscal years. NA—Not available.

financial education among stockholders. On this point the survey turns up some provocative information.

Only 11% of those surveyed, for example, think that balance sheet items are among the fundamental tools needed for appraising their share holdings. Almost a third couldn't even name the items they read first when reviewing a new annual report. And only about half actually felt on sure enough ground to name the items that should be examined as a matter of course when looking over an annual report.

• **Professionals Interested**—On the other hand, brokers, bankers, security analysts, and larger stockholders are very much in favor of today's complete reports. Indeed, they would like to see even more complete reports published. They say that, to analyze most securities properly nowadays, you have to utilize many more sources of information than most annual reports give.

• **What the Experts Want**—Here are some of the items that the professionals would like to see in annual reports:

(1) More details concerning contingent liabilities;

(2) Comparative income statement and balance sheet figures going back at least two to ten years;

(3) Additional data on labor costs, wage rates, labor policies, and the like;

(4) Greater information concerning reserves and inventories, and the methods used in calculating such items;

(5) A breakdown of total income to show the sources from which it is derived, and more data regarding over-all operating costs;

(6) A reconciliation of the figures contained in income tax returns and those published in the annual report;

(7) The extent, if any, of "hidden reserves."

• **Two Audiences**—The professional doesn't like the trend to "revamp balance sheet and income statements for the consumption of housewives." And he thinks that annual reports should stress the unfavorable factors as well as those which make pleasant reading.

The Roper survey thus points up one of the basic dilemmas facing the public relations man who writes annual reports. He must write for both the average stockholder and "the sophisticated, expert consumer of financial data" as well. This opens up the question: Can you satisfy both audiences at the same time?

• **Suggestion**—Here the Controllership Foundation makes an interesting suggestion: Try sending all stockholders a simple one-page "newsletter" signed by the president, outlining earnings, dividend outlook, and the company's general position. At the same time offer to send on request a full-scale report scientifically designed for those who want the cold statistical facts.

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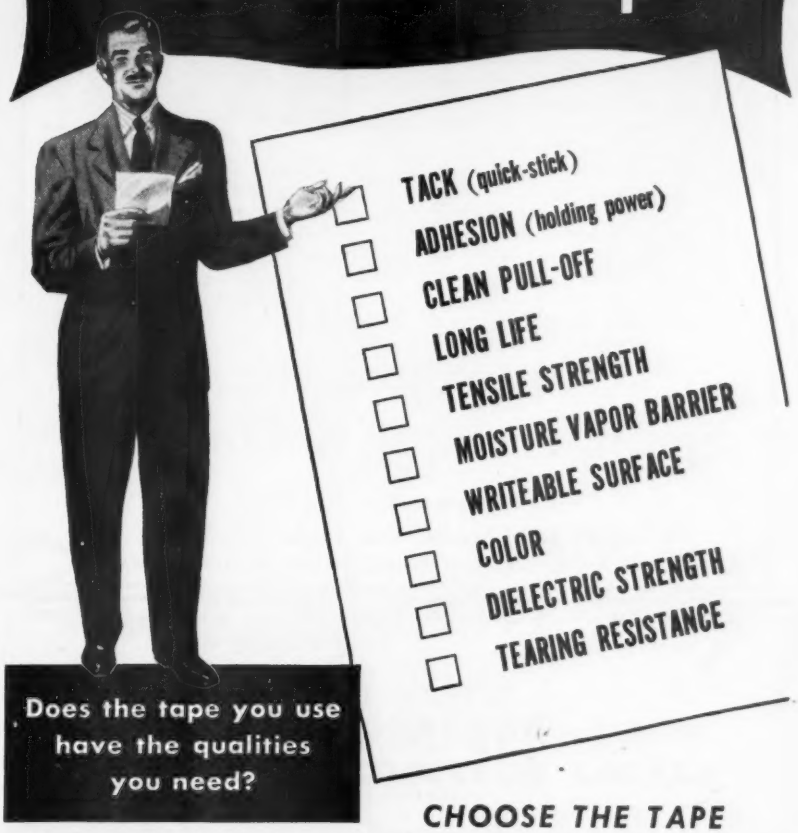

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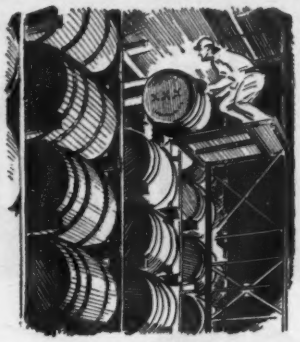

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Taxpayers' Burden

New Mexicans complain that half of state is tax-free public land, due to huge federal government projects.

New Mexico is beginning to resent the rapid extension of tax-free public lands in the state. The taxpayers now feel that they are unjustly carrying a growing burden of "free riders."

• **Pattern Change**—Until World War II, the population pattern in the Southwest followed available food and water. The war, the atomic bomb, and a general westward drift of population upset the balance, creating stress and strain in all directions.

What New Mexico's taxpayers don't like is that the amount of private land is dwindling while government-owned land is rising. For example, the U. S. government owns 34-million of New Mexico's 78.5-million acres. The state itself owns 11.5-million acres. Thus, far less than half the state is taxable property.

• **Land Grab**—When war came, the federal government took over big areas of the state to build huge bombing ranges and military reservations—including Los Alamos, the atomic bomb city. After the war, it took another big reservation for similar work near Albuquerque. And in 1947, the Army picked up two more areas. One was southern New Mexico's Tularosa Basin for buzz-bomb tests (White Sands Proving Ground). The other was the guided-missiles test base at Alamogordo—an area 38 mi. wide and 64 mi. long.

The Army isn't through. Now it wants 2-million more acres in the same valley. This request last week had natives of New Mexico in a fight. Cattlemen oppose this extension; the chambers of commerce are for it. The battle will come to a head at hearings next week in Las Cruces, N. M.

• **Water Shortage**—The population rise brought on primarily by these government projects has New Mexico worried for reasons other than taxes. Besides a housing shortage, it has also brought an alarming drain on water sources. Albuquerque, the biggest city, pumps its water from deep wells. This summer, for the first time, the water table into which the wells dip went down, and seriously.

Gallup and Santa Fe have also had water trouble. The latter was hit because of Los Alamos, a city of 8,000 which mushroomed nearby during the war. It gets its water from the same general sources as Santa Fe.

• **New Drilling**—The result of all this is that drilling for subsurface irrigation

water has increased tremendously. At Roswell, for example, 95,000 acres are now irrigated from artesian wells. In this and two other big areas, the drilling now under way may add 100,000 acres to the total of lands in the state irrigated from wells.

U. S. Sues for Oil Under Railroad's Right-of-Way

A couple of years ago the Illinois Central R.R. got some of the stuff that dreams are made of: It struck oil without even trying.

But although the oil comes from under the railroad's right-of-way in Illinois, a fight over who owns it was in full cry last week. The I.C. claims it's the owner. The federal government disagrees, and has filed suit against the railroad to get the oil for itself. The case will come up in federal court in East St. Louis, Ill., in September.

• **Federal Gift**—The property in question is in Coles County, Ill. It is part of a 200-ft.-wide strip which the federal government turned over to the state of Illinois in 1850 for railroad purposes. The state deeded the property to the I. C. the following year.

In May, 1946, the railroad entered into a lease with the J. W. Menhall Drilling Co., Benton, Ill., to extract oil from the strip. Royalties were to be shared by the two. The I.C. would get a return from one-eighth of the oil produced, the rest was to go to the producer for drilling and operating costs. Up to July 1, 1947, the railroad had received $6,050 as its share of the $48,400 worth of oil produced from five small wells.

• **Federal Claim**—Then the Interior Dept. stepped in. It claimed that the I.C. only holds an easement over the land (the right to use it), that the mineral rights are still government property. To back this up, it recently filed suit in federal court. The I.C., of course, contends that it owns the property outright, so holds the mineral rights.

Further royalties from the oil have been impounded pending the court decision.

THE PICTURES—Acme—19, 50, 51, 74 (top left), 92, 95; European—105 (right); Ewing Galloway—74 (top right, bot. right), 94 (top left); Harris & Ewing—85, 94 (bot.), 96 (top right); Int. News—94 (top right); Sovfoto—105 (left); Wide World—80, 94 (center), 96 (top left, bot.).

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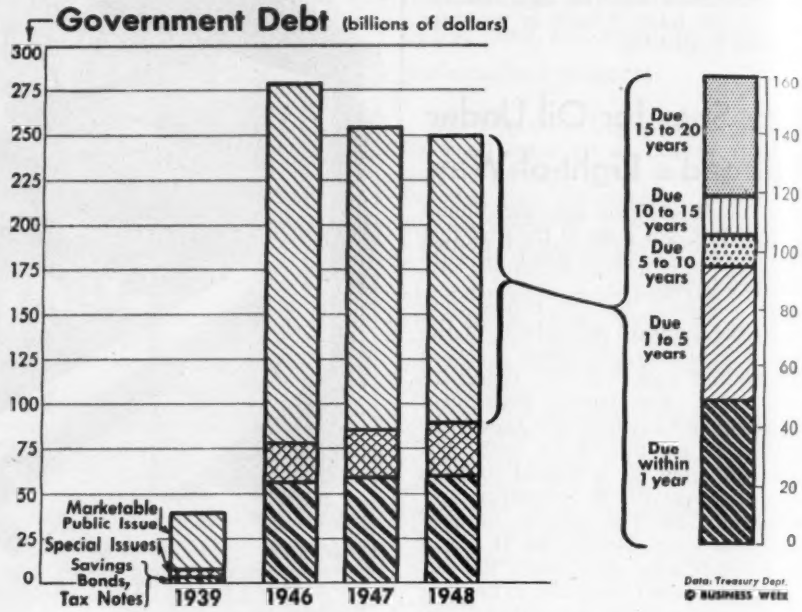


G. O. P. Inheriting Easy Money

Composition of national debt means that there can't be a drastic change in credit policy, even if Dewey wins. Bond market support will have to continue—for a while, anyway.

If you study this chart, one thing becomes clear: A Republican victory next November would not mean the end of the government's easy-money policy. In fact, for a while it would be hard for the money market to tell the difference between Democrat and Republican.

You can draw the same conclusion from the congressional hearings this week on credit policy. But if you want to read between the lines, you also can conclude that eventually the Republicans will try to work away from the easy-money policy—or at least modify it.

• **Reserve Board's Plan**—In this week's hearings, Thomas B. McCabe, chairman of the Federal Reserve Board, asked Congress for authority to raise the reserve requirements of commercial banks by 10 percentage points. At the same time, he promised that the board would use kid gloves in applying this new power. And he made it plain that the monetary authorities will keep on supporting the price of government bonds at par (page 9).

Republican leaders are now chewing over McCabe's proposition. They may not go along with him all the way. But it is significant that none of them has suggested that the Reserve Board should just scrap its support policy and let the government bond market take care of itself.

In other words, the Republicans are tacitly endorsing the bond support program. And they have good reasons for doing so. Some of them have been doing homework with the basic figures on the national debt and its composition.

• **Inheritance**—If the Republicans take over the White House next January, they also will take over a $250-billion mortgage. That debt has to be the starting point of any monetary policy a new administration frames.

Now take a look at the maturity schedule. Almost $50-billion of the total

Security Price Averages

	This Week	Week Ago	Month Ago	Year Ago
Stocks				
Industrial	156.3	160.3	165.9	153.2
Railroad	48.6	49.9	51.9	43.8
Utility	71.1	72.1	74.2	76.3
Bonds				
Industrial	98.9	99.3	99.2	103.2
Railroad	87.7	88.8	89.3	89.9
Utility	94.8	95.0	95.8	103.6

Data: Standard & Poor's Corp.

debt is due or callable within one year. Another $46-billion comes due within one to five years.

In other words, Dewey's Secretary of the Treasury will have to handle $95-billion in maturities during his first term in office. And that's not counting about $60-billion in tax notes and savings bonds due on demand. He can exchange securities, refund, or pay off in cash. But he will have to round up the money one way or another. And obviously, he will have to keep the money market under tight control while he is doing it.

• **Long-Term Policy**—With a short-term debt like that, the Republicans won't be able to afford any sudden jumps in interest rates. The most they could do would be to allow a gradual stiffening.

But Dewey's secretary will be able to make a start toward freeing his hands eventually. The first step will be to begin funding the short-term debt. As the near-by maturities come up, he would replace the short-term securities with intermediate or long-terms. By this process, he gradually puts more and more of the debt into distant maturities.

For inspiration the Republicans can—and probably will—go back to Andrew Mellon whose funding plan tidied up the national debt after World War I.

• **Problem Persists**—But funding is going to be a long slow process this time. And the huge volume of savings bonds—payable on demand—will complicate the process. Hence, for a good while to come, the Republicans will have the same problems that the Democrats have had. It won't be a question of whether to support the government bond market. It will just be a question of where and how.

Corporate Dividends Climb to New Peak

The big corporate earnings of recent years are gradually showing up in dividends.

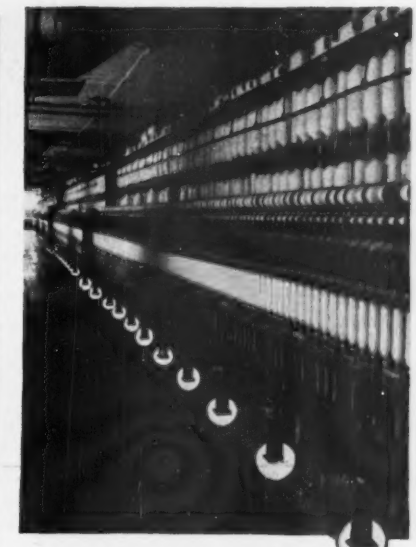
Payments to holders of common stocks listed on the Big Board hit a new high in the first half of 1948. The six-month total was $1,644,000,000. That's $200-million more than stockholders got in the first half of 1947, and about $500-million more for the first half of 1946.

Almost 84% of the Big Board's listed common stocks paid dividends in the January-June period this year. This compares with 82% last year (BW—Jul.26'47,p99).

Here is the New York Stock Exchange's tabulation of dividend payments for the first six months of 1947 and 1948:

Industry	Number of Issues	Jan.-June Dividend Payers 1947	Jan.-June Dividend Payers 1948	Dividend Results 1948 vs. 1947 Higher	Same	Reduced	Approx. Amount of Dividends (000 omitted) 1947	1948	% Change 1948 vs. 1947
Aircrafts mfrs.	14	5	3	2	1	2	$4,707	$6,054	+28.6%
Amusement	20	17	17	6	6	5	29,477	27,522	− 6.6
Automotive	67	51	55	33	18	5	107,598	128,279	+19.2
Building	26	22	24	18	5	1	13,465	19,989	+48.5
Business & office equip.	10	9	9	7	2	0	11,459	*13,851	+20.9
Chemical	77	74	72	24	38	12	169,880	178,819	+ 5.3
Electrical equipment	18	17	18	9	8	1	36,629	38,859	+ 6.1
Farm machinery	6	4	5	3	2	0	12,224	19,516	+59.7
Financial	30	24	26	9	15	2	33,806	34,947	+ 3.4
Food	66	61	63	28	23	12	88,743	105,974	+19.4
Garment mfrs.	6	5	6	2	3	1	1,693	1,786	+ 5.5
Land, realty & hotels	6	4	4	1	3	0	1,880	2,254	+19.9
Leather & shoe mfrs.	11	9	10	5	4	1	8,262	10,638	+28.8
Machinery & metals	98	83	90	41	45	5	48,926	61,475	+25.6
Mining	36	26	28	16	9	3	44,795	62,542	+39.6
Paper & publishing	31	26	29	14	13	2	22,655	30,135	+33.0
Petroleum	42	37	40	33	4	4	181,744	204,394	+12.5
Railroad	82	48	52	13	34	6	93,763	104,955	+11.9
Retail merchandise	71	66	65	18	39	10	108,991	114,225	+ 4.8
Rubber	10	10	8	1	7	2	18,404	18,530	+ 0.7
Shipbuilding	5	5	4	0	4	1	2,131	1,712	−19.7
Ship operating	6	5	4	3	1	1	4,514	5,549	+22.9
Steel, iron & coke	39	31	31	16	12	4	57,439	69,211	+20.5
Textile	37	35	35	20	13	3	32,112	39,487	+23.0
Tobacco	17	16	16	6	9	1	28,231	34,408	+21.9
Transportation services	4	3	2	0	1	2	839	513	−38.9
Utilities	73	57	61	16	39	8	195,604	216,811	+10.8
U. S. companies oper. abroad	24	13	11	8	1	4	24,222	33,337	+37.6
Foreign companies	16	14	13	5	6	3	37,411	40,326	+ 7.8
Other companies	33	22	22	14	5	5	15,929	18,083	+13.5
Total	981	799	823	371	370	106*	$1,437,533	$1,644,181	+14.4%

* *Payments were reduced on 82 issues, eliminated or deferred on 24 issues.*



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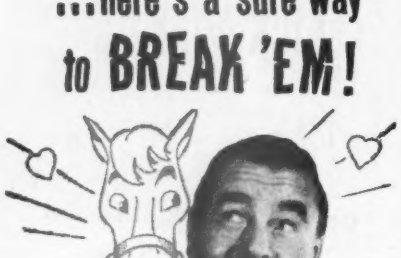

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LABOR

Unions Veer Further Right

The left wing of the C.I.O. has suffered sharp setbacks. The right wing has swept elections in two borderline unions, and has led wholesale secessions out of others that are pro-Communist.

Communist influence in American labor this week dropped to the lowest point yet. Two important borderline unions in C.I.O.—heretofore not clearly allied with either its right-wing or left-wing factions—swung sharply to the right.

• **Curran and Wagner**—The National Maritime Union was one of them: Its 60,000 members voted three-to-one to back the right-wing policies of president Joseph Curran.

The Gas, Coke & Chemical Workers was the other: Its 54,000 members re-elected president Martin Wagner and named a right-wing executive council to work with him.

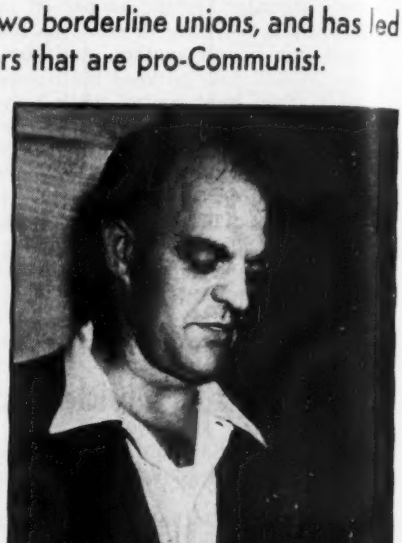
• **Changed Attitude**—Meanwhile, large-scale defections from left-wing unions in C.I.O. continued to harass the pro-Communists. And even the important left-wing strongholds like the Greater New York City Council of C.I.O. were brought under direct attack by right-wing unionists.

The important right-wing gains have a significant meaning: Union rank-and-file members are now reflecting the same attitude toward communism as the general public. The hard work and adroit politics of union leaders who follow the party line no longer are paying off in some of the country's top unions.

• **Still Militant**—This fact has eased government and industrial concern over the possibility of serious political strikes in the offing—such as a shipping tieup to block the movement of Marshall Plan cargoes. It's not likely that maritime leftists could now muster strength enough to get unionists to "hit the bricks"—unless the rank and file saw a real economic reason for it.

However, a trend to the right should not be interpreted to mean that unions will have any less aggressive and militant leadership. To the contrary, the Curran, Wagner, and other right-wing forces are now going after real contract gains to bulwark their victories against leftist foes.

• **Curran's Sweep**—The biggest setback for C.I.O.'s left wingers came in the N.M.U. national election. Curran gained a complete victory after a year-long fight to oust leftists—including several admitted Communists—from top offices in the union. His success freed



N.M.U. PRESIDENT Joseph Curran, backed by members, steers to C.I.O.'s right

N.M.U. from leftist control for the first time since it broke away from A.F.L. in 1935.

Curran received 28,043 votes to 9,640 for Frederick (Blackie) Myers—a former N.M.U. vice-president who headed the leftists' ticket. Neal Hanley, a Curran man, defeated (24,071-to-12,549) one of N.M.U.'s most controversial figures—national secretary Ferdinand C. Smith, who is fighting deportation by the government as a subversive alien.

• **Trials May Follow**—In all, 42,439 union members who voted in the three-month mail election named 131 officers—including port agents, dispatchers, and patrolmen in N.M.U.'s seaboard offices. No Curran candidate was defeated. Even the left-wing stronghold port, New York, named Curran men by a two-to-one margin.

Defeated candidates announced they would comply with an N.M.U. rule by "shipping out" to reinstate their union status as seamen. But the Curran national council has other plans for some of them: trials, under union by-laws, for "crimes against the membership."

• **100% to the Right**—In the Gas, Coke & Chemical Workers (C.I.O.)—a key union in atomic energy and chemical industries—members voted six left wing-

ers out of top union offices; their elimination gave the union a 100% right-wing leadership.

The ouster of the pro-Communist forces in the G.C.&C.W. wasn't an abrupt move. In April, 1947, the executive board adopted a policy statement opposing communism and the activities of Communists within the union. A few months later president Wagner, with executive board approval, relieved two union officers of their duties—and salaries—for openly attacking the anti-Communist policy. The Milwaukee action just completed the cleanup started then.

• **Radio Union**—Two weeks earlier, the small American Radio Assn. (C.I.O.) also took a position firmly on the right in C.I.O. It announced that "progressive non-Communist candidates" had swept the union's first biennial election.

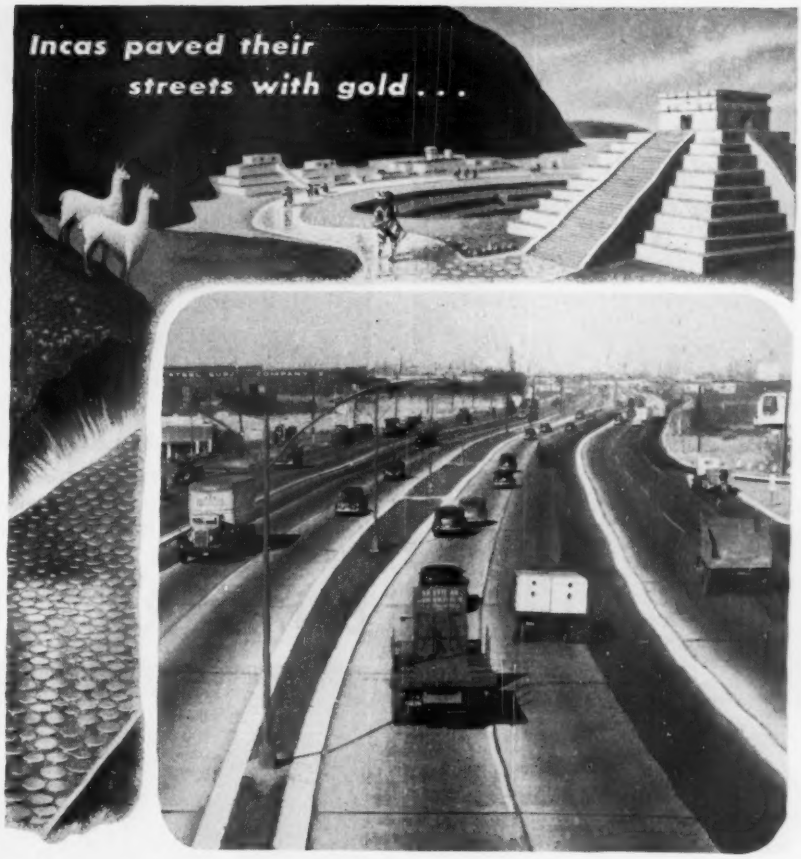
Members rejected the entire slate of leftists. The 3,500-member A.R.A. broke away from the leftist American Communications Assn. (C.I.O.) last December.

• **Major Secessions**—Currently, the leftist United Office & Professional Workers, and Mine, Mill & Smelter Workers (both C.I.O.) are major targets of right-wing secession movements. The Industrial Union of Marine & Shipbuilding Workers—fast turning into the C.I.O. catch-all—recently took in several hundred social service workers in New York City after they quit U.O.P.W. And the United Paperworkers (C.I.O.) has set up an insurance agents' division for several thousand other U.O.P.W. members who rebelled against leftist leadership.

The biggest secession movement recently in M.M.S.W. was led by Ken Eckert, national chairman of the Castings Division. His group took 24 of 37 locals in the division out of M.M.S.W. and set them up as a National Assn. of Die Casting Workers, claiming 16,000 members. M.M.S.W.'s 3,500-member Chase Brass Co. local in Bridgeport, Conn., also switched to A.F.L.

• **Rebel Council**—Of even greater significance, the Greater New York City Council of C.I.O.—which has followed the Communist Party line on most issues arising during the last eight years—now faces its first real challenge.

In recent weeks, New York City right-wing C.I.O. unions, with an estimated 250,000 members, have united to form a new council. So far, the right wingers haven't official C.I.O. recognition—but Murray is reported about ready to crack down on the Greater New York City Council with an ultimatum: Either comply with national C.I.O. policy (by dropping endorsement of the Henry Wallace third party, etc.) or forfeit the right to speak for C.I.O. in New York City.



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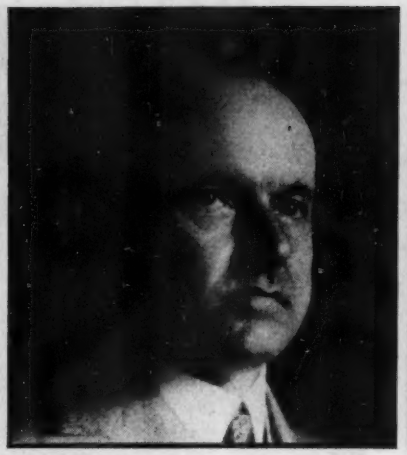
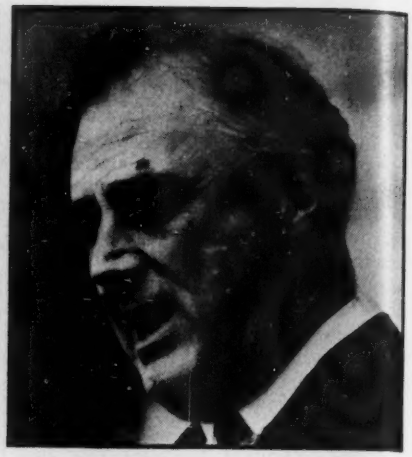


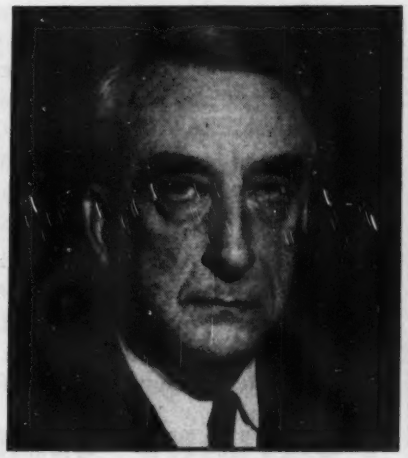
1 PRESIDENT COOLIDGE signed the Railway Labor Act in 1926. A model labor law for 15 years, it has had troubles since . . .



2 PRESIDENT ROOSEVELT intervened in 1941 in a wage dispute. Unionists rejected an award, whereupon F.D.R. had it reviewed.

Behind Rail Labor Act Trouble

3 1941 FACT-FINDERS, headed by now-Sen. Wayne Morse (seated, center), boosted their original wage recommendation on F.D.R.'s urging. So, in 1943, when . . .



4 FRED M. VINSON, Economic Stabilizer, vetoed all but 4¢ of a rail pay boost, unionists hurried back to the White House, where . . .

5 ROOSEVELT AGAIN intervened, to approve a 9¢ hourly increase. Result: When another wage award didn't satisfy them in 1946 . . .

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6 UNION LEADERS Alvaney Johnston of the Engineers, A. F. Whitney of the Trainmen, pressed for more. They set a strike date and . . .

7 RAILROADS WERE SEIZED by the government as President Truman acted to bar a tieup. But a week later . . .

8 TRAINMEN QUIT JOBS in a walkout that crippled the railroads. As demand for new labor laws mounted . . .

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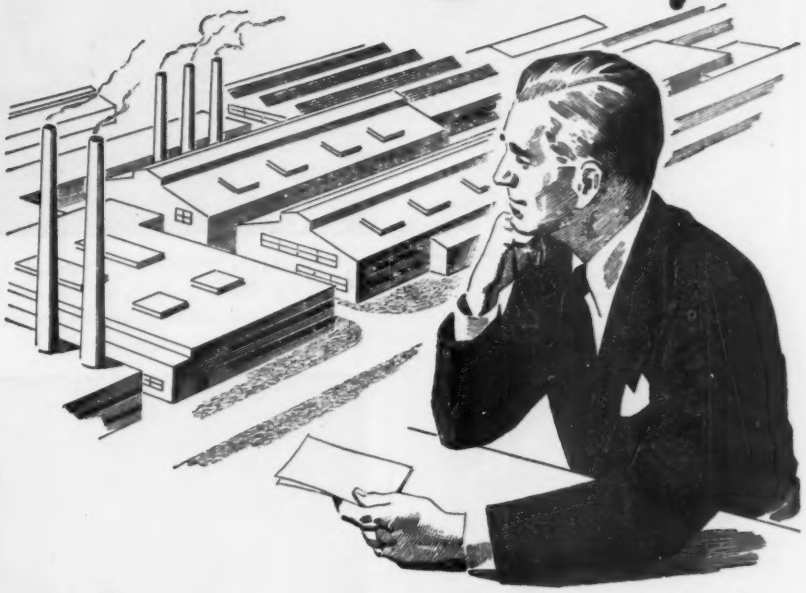

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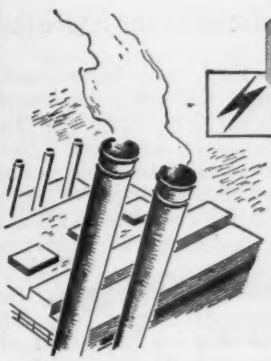

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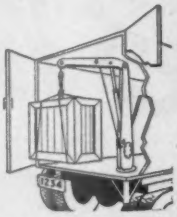

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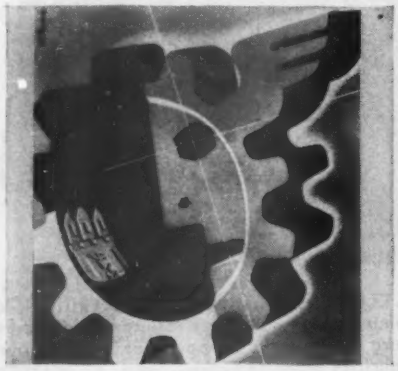

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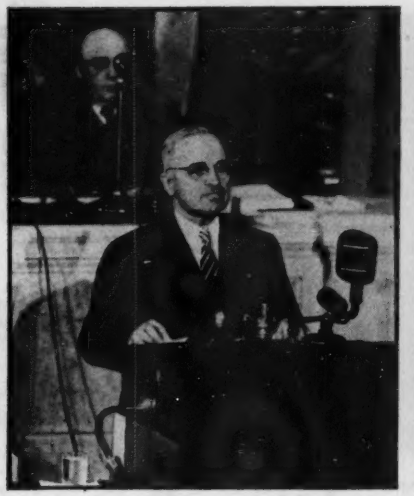
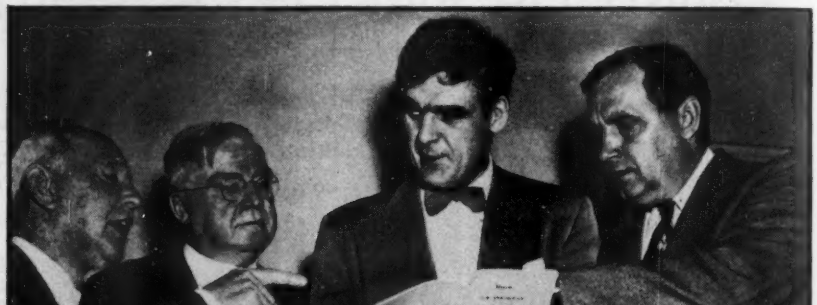


9 TRUMAN WENT TO CONGRESS, asking power to draft rail strikers. As he spoke, unions ended strike, but got some wage gains anyhow. Again, in 1948 . . .

10 WHITE HOUSE PARLEY brought rail peace after strike threat, seizure of roads, and antistrike injunction. Recurrence of the post-1941 pattern drew . . .



11 CONGRESSIONAL INTEREST as Sen. Joseph Ball (report in hands) asked union leaders D. B. Robertson, Firemen; Johnston, Engineers; and A. J. Glover, Switchmen, why dispute wasn't settled under Railway Labor Act. Later, Ball's "watchdog" committee took up the question of . . .

New Laws for Transport Disputes?

Congress thinks stronger mediation setup, changes in Taft-Hartley act might keep future rail and air troubles out of White House.

Back in 1924, rail brotherhoods turned down a Railroad Labor Board decision in a Southern Pacific wage dispute. That doomed the federal Transportation Act of 1920. In its place came the Railway Labor Act of 1926, which did away with the discredited RLB and set up new mediation and arbitration machinery.

• **Prevention**—For two decades, the Railway Labor Act worked smoothly enough to prevent any important railroad labor troubles. The law had been drafted with rail-union and management collaboration; it was hailed as a near-perfect labor relations statute.

Now congressional labor committeemen are once more questioning the nation's transportation labor law. For two years, troubles have mounted under the "model" Railway Labor Act.

It wasn't tight enough to avert a crisis over recent union wage demands; so the federal government had to dust off an old seizure law to prevent a rail tieup (BW—May15'48,p110). It hasn't teeth enough to nip a labor-management dispute over grievance handling

in National Air Lines. And now it's apparently facing a new test in a Transcontinental & Western Air contract dispute.

• **Frequency**—There were only nine minor strikes under the Railway Labor Act during the 10 years before 1945. But now labor flareups in transportation are coming fast enough to alarm congressional leaders. In 1945 there were two strikes against carriers under Railway Labor Act jurisdiction; in 1946 there were four. In 1947 this doubled to eight—and that many have already occurred in seven months of 1948.

A congressional labor subcommittee studying the Taft-Hartley law considered this growing problem in June. It wanted to find out (1) why the Railway Labor Act is on such a bumpy track these days; and (2) why more and more transport disputes are winding up in White House settlements.

• **Pressure**—One answer: The rail unions have found out that they can get more contract benefits by going through regular processes of the federal law—and then applying extra pressure. They can do this because there is nothing in the law that requires them to accept binding arbitration. Nor does the law force them to accept a fact-finding recommendation of settlement terms.

• **Two Questions**—This situation has set congressional labor committeemen to asking two questions:

(1) Should Congress amend the Railway Labor Act to make it more potent, perhaps include compulsory arbitration?

(2) Should the act be left as it is, and the Taft-Hartley law amended to include rail and air employees? This would make possible the application of the T-H "national emergency" procedure—including a strike injunction—in transportation labor disputes.

• **What's Wrong**—The T-H "watchdog" committee headed by Sen. Joseph Ball may recommend one course or the other when it reports to Congress in January. Meanwhile, more and more, this question is going to be asked: What—if anything—is wrong with the Railway Labor Act?

The present cracks appeared in it in 1941. Trainmen and engine crewmen rejected a contract dispute settlement recommended by a Railway Labor Act emergency board. They set a strike for Dec. 7, 1941—the morning of Pearl Harbor. The late President Roosevelt intervened, got the emergency board to review its recommendations.

On Dec. 5 panel members reported that there was no good reason for changing their original recommendation. But because of the "national defense" crisis the board did give unions a slightly better settlement than on the first try.

• **Strike Threat**—Another rail wage dispute went to the White House in 1943. Stabilization director Fred M. Vinson

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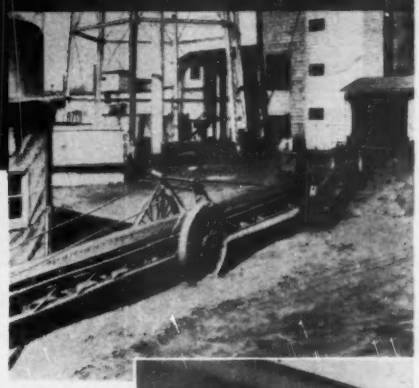

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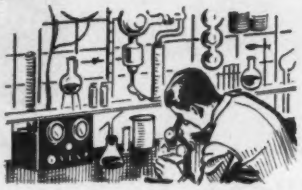

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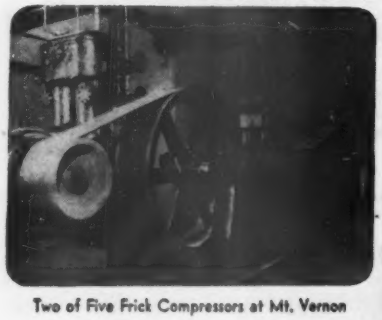

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vetoed an emergency board wage recommendation as contrary to the national wage policy. The unions said they would strike.

Again, the White House intervened. Vinson had approved a 4¢ hourly raise as the maximum allowable; President Roosevelt gave the unions 9¢. He justified the extra nickel as payment in lieu of overtime (rail employees don't come under the wage-hour law) and for expenses while away from home. For the second time, a trip to the White House paid off for the brotherhoods.

• **Strike**—The same sort of thing happened in 1946. The Trainmen and Engineers rejected a 16¢ arbitration award which had been accepted by other operating and nonoperating unions. The two key unions said they also wanted some long-delayed work-rule changes. They set a strike date: May 18, 1946.

On May 17, President Truman seized the railroads under the Smith-Connally act. Despite this, the two unions struck one week later. The walkout lasted 48 hours, ended in union capitulation as Truman asked Congress for a labor draft law to keep trains running.

But, for a third time, White House intervention paid off. The two unions got 2½¢ an hour more (18½¢ instead of the original 16¢ settlement) for foregoing rules changes for one year.

• **Injunction**—And in 1947-48, three operating brotherhoods turned down a 15½¢ arbitration board settlement, accepted by nonoperating unions and the other operating brotherhoods. The reason: The three unions wanted action on work-rule changes. They set a strike date. Again, President Truman ordered the railroads seized. A strike was enjoined by U. S. District Court Judge T. Alan Goldsborough.

Union railroadmen stayed on the job, finally settled for the same 15½¢ raise which the others had won months before. But they could claim a partial victory in a number of rules changes. The pattern had repeated itself: A fight for just a little bit more had paid off.

• **Why the Change?**—Prior to 1941, such a heavy reliance on the White House hadn't existed. Then, contract differences were worked out around a table or in mediation. Why the change? There are several reasons that are frequently mentioned.

One is that there has been a gradual cooling off in relations between railroads and unions. The collaboration and close contacts of the past—which helped bring the Railway Labor Act into being—no longer exist on most roads.

Many of the old-time union leaders worked in shirtsleeves with railroad bosses. Now they are being pressed by younger unionists who want to move up into their jobs. So the leaders have to keep producing, in step with the trend of the times. On management's

side, many bosses who started out on the tracks have now turned labor relations over to younger specialists. Result: There's less and less friendly give-and-take bargaining now.

• **The War**—Another factor was the war. The government was vitally concerned with the problem of keeping trains running. Every strike threat was referred to the White House.

This set a precedent that has outlived the war. Moreover, it has led to congressional complaints that the National (Railway) Mediation Board now automatically sends disputes along to the President. NMB denies this. It says it is handicapped because now "both sides keep their sights on the White House."

• **C.I.O.'s Part**—The growth of the C.I.O. has also had a disturbing effect on railroad unions. It has made them more conscious of national wage movements—and patterns. It has kept railroad brotherhoods on the move, pressing wage and work-rule demands, to protect themselves from C.I.O. raiding. Brotherhood leaders, pacesetters for years, are determined not to let the C.I.O.'s "young Turks" show them up.

Hence, what C.I.O. unions win now influences brotherhood acceptance, or rejection, of arbitration awards.

• **Leadership Fight**—Finally, there's a lively rivalry between railroad brotherhoods for leadership. This prompts one union to try to get just a little more than a group that it opposes.

What can be done about the situation? Unions and rail management generally oppose compulsory arbitration. There already is a compulsory arbitration clause in the Railway Labor Act covering contract grievances which can't be settled otherwise. Both parties complain that this has caused grievance handling to bog down.

Most unionists and carrier officials feel that the present machinery for handling disputes is enough to bring about settlements in normal cases. They don't think that a change in the law would really touch on the reasons why recent disputes weren't settled by negotiation.

• **Increase Its Stature**—Current congressional opinion is that: (1) The stature of NMB should be increased to make it a more potent mediating agency in rail disputes; and (2) some form of compulsion should be written into the law to provide a means of warding off bad railroad strikes. (The law under which the roads were seized this year, and a strike enjoined, might not weather a federal court test now under way.)

Congressional labor law drafters now think the first of these needs can be met by more careful screening of future appointments. And they think the second need could be met through a T-H amendment—thereby leaving the Railway Labor Act in its present form.

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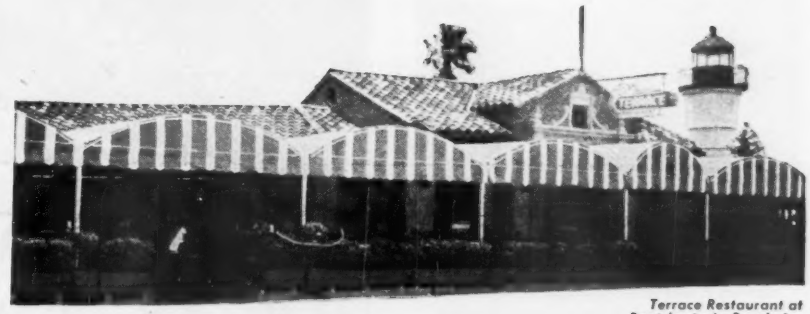

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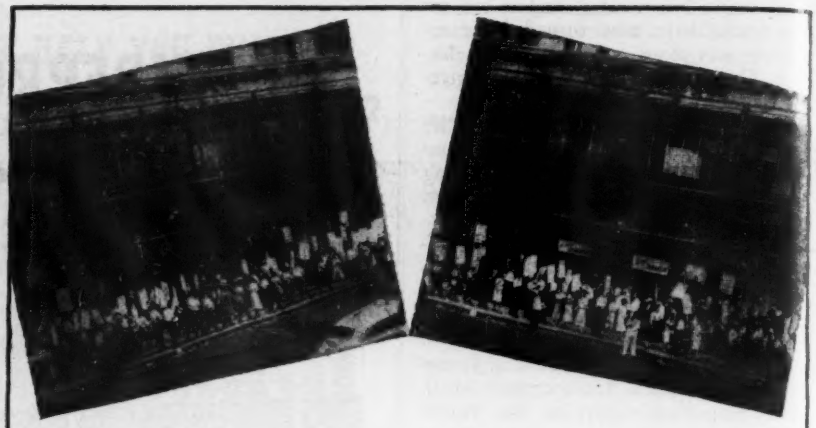

IS THIS MANHATTAN OR IS THIS BERLIN

Take a long look at these pictures. They have an all-important message for you.

They tell, better than words, what happened to a long-established and reputable American business house, here in New York, when it dared to take issue with Communism.

There is no strike at Oppenheim Collins, where these photographs were taken. And every non-executive employee in both Manhattan and Brooklyn is covered by one of seven union contracts in force.

Yet when Oppenheim Collins refused to help Local 1250, CIO, evade the Federal Labor Law on Communism, the Department Store Joint Board, which represents five left wing CIO department store unions, organized this demonstration. Massed pickets blocked Oppenheim Collins' doors just as thoroughly as Stalin's Communist generals have blocked the land corridors into Berlin.

The point is . . . Is this Manhattan, or is it Berlin? Are orderly processes of American life and law to prevail, or only the business end of a blackjack?

Two weeks ago, it was Gimbel Brothers store which was given "the political treatment", because one of the Gimbel executives, under subpoena, testified with respect to Communist infiltration into the leadership of certain Department Store Union locals. Last night, it was the turn of Oppenheim Collins.

How soon will it be you?

Oppenheim Collins

Ads Answer Pickets in T-H Affidavits Fight

This Oppenheim Collins & Co. ad in New York newspapers last week end threw down the gage before a left-wing union that had called a strike. It charged picketing was "political treatment," ordered because the company had "dared to take issue with Communism."

In turn, Local 1250 of the Retail, Wholesale & Department Store Employees (C.I.O.) charged that the company refused to bargain in good faith on a contract-extension offer. The communism issue, it said, is a "red herring" to discredit picketing in a contract dispute.

Actually, the dispute simmers down to a Taft-Hartley issue. Local 1250 officers haven't signed non-Communist affidavits; hence the union can't do business with the National Labor Relations Board. Recently, A.F.L.'s Retail Clerks International Assn. moved into Oppenheim Collins stores. Since Local 1250 couldn't get on an NLRB ballot, it tried to ward off an election by asking for a contract extension. The company refused. The strike resulted.

At midweek, picket-line pressure wasn't showing any results. Oppenheim Collins reported normal business and a full staff on the job. And employees who ignored picket lines chose A.F.L. as bargaining agent in an NLRB poll. Of 475 eligible, 276 voted A.F.L.; 108 voted "no union".

INTERNATIONAL OUTLOOK

BUSINESS WEEK
AUGUST 7, 1948

SERVICE

There's a temporary easing of the war-scare tension.

That's the first result of the conference of western diplomats with Russia's Foreign Minister Molotov and Premier Stalin.

But the basic issues which created the Berlin impasse have yet to be settled.

Withdrawal of the western Deutsche Mark from Berlin won't do it.

Lifting of the Soviet blockade of Berlin won't do it either.

The issue is bigger, tougher. It consists of: The future of the Ruhr; reparations; a unified German government; the German and Austrian peace treaties; withdrawal of occupation forces, plus a half dozen lesser, but still important, points.

There will be many more headaches, more tension, long negotiations veiled in propaganda before these problems are solved—if they can be solved.

•

Was the Moscow meeting another Munich for the West? That's what it looked like. But it need not be.

Until this week East and West were slugging it out at a distance. Now they have agreed on the rules and will meet in the center of the ring. That, in itself, is progress.

One sure consequence: U. S. German policy will be put back in the hands of the State Dept. (for better or worse). Few if any loose ends will be left for on-the-spot settlement in Europe.

•

If intelligence reports from Europe are accurate, the war scare got well behind the Iron Curtain.

Since June, the Red Army has been rushing defenses along the western frontiers. Thus:

Civilians have been evacuated from coastal areas and from the islands of the Gulf of Finland and the Gulf of Riga. Here major fortifications are being built.

A series of major airstrips is being rushed in Estonia, Latvia, and Lithuania. They are ringed with heavy antiaircraft defenses. Some of the strips can handle 1,000 planes.

Testing of V-1, V-2, and V-5 missiles has been stepped up. Stockpiles of missiles and fuel have been assembled.

On the more peaceful side, reports from the Baltic states say that postwar recovery and reconstruction are humming. The shale-oil deposits in Estonia which will supply oil to Leningrad via a new pipeline (BW-May16'46,p113), are producing at five times the prewar rate. Road and railroad work is moving along fast.

•

No longer will the western powers have a place on the Danube Commission.

Andrei Vishinsky, Soviet Deputy Foreign Minister, is having a field day at the Belgrade conference over the famous river.

With the U.S.S.R. and the eastern European states lined up 7 to 3 against Britain, France, and the U. S., Vishinsky can railroad a new Danubian statute through the conference.

Britain and France were members under the 1921 pact. The U. S. is in Belgrade as an occupying power in Germany and Austria, both of which will join the commission after the peace treaties.

The Council of Foreign Ministers decreed free and equal access to

the Danube to all shipping, and the draft convention submitted by the Soviet Union has this proviso. But actual control of the upper and lower Danube is in the hands of Russia and her satellites.

Before the war, private French, British, Dutch, and other western European nationals had shipping lines on the Danube. Their chance of getting back into this business is slim.

•

Incorporation of Newfoundland as the tenth province of Canada will benefit both Canadian and U. S. business.

For Canadians, exports will go into Newfoundland duty free.

For Americans, exports will go in at the Canadian tariff level—quite a bit lower than the old Newfoundland rates.

Some small Newfoundland manufacturing industries may die from exposure to outside competition. On the other hand, the Canadian fishing industry will face tough competition from the low-cost Newfoundland fishermen. These will have free access to the Canadian market, also to export markets under Canadian preferential trade agreements.

•

The dollar shortage in Argentina (BW-May15'48,p126) has brought economic relations with the U. S. to a low ebb.

Ambassador James Bruce is in Washington to unsnarl matters. The upshot of his visit may be Marshall Plan buying in Argentina.

Peron may be ready to cut prices on European-aid exports, if and when Marshall Plan buyers come shopping.

Trade with the Argentine has been cut to a dribble, and U. S. exporters are not happy about it. Nevertheless, they are not ready to trade on Argentine terms.

They have been told that dollar payments will be withheld for a year, but guaranteed by the government at that time. One American bank in Buenos Aires says it will not advance any money against these blocked credits. It's too bad a risk.

•

American automobile manufacturers have stopped shipments to Argentina. Other manufacturers are reported ready to follow suit.

Meanwhile, Argentina is defiant on the dollar question. Bilateral trade agreements being signed with European countries call for dollar payments. Miguel Miranda, president of the National Economic Council, is still sure there will be plenty of dollars for Argentina's essential imports.

He boils it down to this tough formula: European countries are rapidly exhausting their credits, will have to pay dollars for future purchases. Unless Europe learns to live without food it will need Argentine products. So the Argentine will get dollars.

•

British big steel is taking a stitch in time, what with nationalization in the offing.

Guest, Keen & Nettlefolds, Ltd., a steel group, has formed separate companies to take over some fabricating functions.

The wire and bar industry in Cardiff, Wales, has been split off from the combine. So have the screw and bolt manufacturing facilities in Birmingham and in Darlaston, Staffordshire.

Thus, private operators hope to be left with something if they lose basic steel processing.

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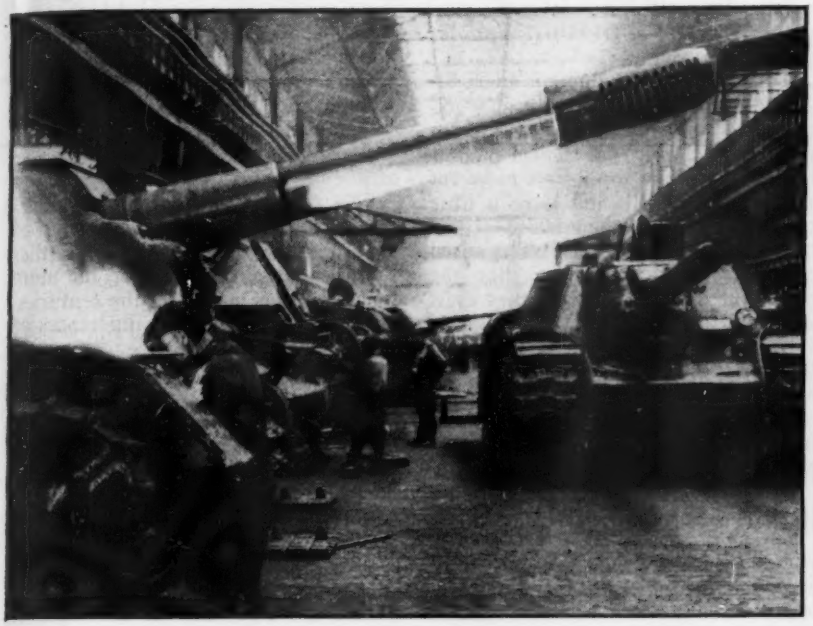
BUSINESS ABROAD



Russia's stress on munitions at the expense of consumers is a clue to . . .

What Another War Would Mean to Soviet Union

Russia can shift to a war economy overnight. Half its industrial effort now goes into munitions, at the sacrifice of living standards. War would bring chaos, starvation, and a return to barbarism.

Recently Business Week described the "Economic Consequences of a Third World War" for the U. S. (BW—Apr. 24'48,p19). Its thesis: While World War II was tragic, in a lot of ways it was not hell for the U. S.; but a World War III would be grim and miserable for everyone with no compensations. To fill out the picture, the McGraw-Hill Economics Staff has prepared the following analysis of the economic consequences for Russia of a third World War. It's drawn from the opinions and hunches of experts on Russia, and fragments of economic and military information.

For Russia, World War II was hell. And life for the Russian people is a grim and miserable business now, as Stalin drives ahead with preparations for World War III. For some of them—and for many Europeans—the economic consequences of another war would be a sudden return to barbarism and starvation.

I. Present Mobilization

Study of the day-by-day working of Soviet industrial and political strategy outlines the Soviet position. And the picture is very different from America's.

If war breaks out, the Russians will be in—totally and immediately. There will not be a period of preparation, debate over controls, or a fumbling transition from peacetime profits to wartime compulsion.

For Russia is now economically mobilized for war at a short-of-shooting peak. The Soviet is now channeling more than half of its industrial effort into producing munitions or new plant and equipment that can make munitions.

• **More for Munitions**—That explains how the Russians are now outproducing the U. S. in munitions. Over-all today, the U. S. is outproducing Russian industry about four-to-one. We turned out 85-million tons of steel last year, for example, while the Russians produced 19-million tons. We generated more than 250-billion kwh. electric power, five times as much as did the Soviets.

But the Russians are producing several times the volume of war weapons that the U. S. is turning out. For example, the Soviets, by testimony of the Air Force, are producing perhaps 12 times as many military planes as we are.

• **Out of Bombs' Way**—Much of this Russian effort is hidden from the world's eyes—and placed beyond reach of bombers carrying atomic weapons—in the vast areas beyond the Ural mountains. But scraps of information filter out: Two new airplane engine plants, 20 miles from Ufa, cover an area of almost a square mile, have 70,000 employees. The Kuznetsk region is reported to manufacture more ordnance than did all of Germany in 1943. Novosibirsk, in western Siberia, has become a giant tank plant, its population growing to more than a million in recent years.

A whole new chain of industrial cities is reported rising in southwestern Asia, extending in a belt through central Siberia. In Tashkent, heart of the Russian cotton country, textile plants for army supply are being built. New industrial centers are being built in eastern Siberia and the East Arctic.

• **Weak Points**—There are weaknesses, of course. The Russian oil industry in late 1947 was producing only 87.5% of 1937 output.

Aluminum is another weakness. The Soviet imported some 120,000 tons in 1944 under Lend-Lease, when many of her plants in western Russia were destroyed. The Lend-Lease source is gone now, of course, and as yet domestic production from new and rebuilt plants is not likely to have come near that amount.

These, and other bottlenecks, will be tough to break. But the Russian war machine is adding muscle all the time and cannot be underestimated. Some

economists believe that even now the Soviet Union's armor may be more extensive and more efficient than was Hitler's at its peak.

All this underlines the Soviet's No. 1 objective: to build up a war industry that can match, even outdistance, the United States. And that industry is being built, no matter what it demands of the Soviet people.

II. Effect on the People

The costs to the Russian people of this military program are probably beyond understanding for most Americans. But we can lay up one or two statistical yardsticks to measure them.

• **Housing**—First may be housing. The Nazis in their sweep through western Russia destroyed the homes of some 25-million Russians. But, in the face of that loss, and in spite of a rapidly growing population, Russia's entire housing program under the fourth Five-Year Plan calls for building only 72-million square meters of living space. That, translated into our terms, about equals the number of homes we will build this year.

Moreover, the construction industry is lagging. Building repairs in Moscow last year fell short of their target by 70%. Of course, industrial plants and public buildings get priority on what materials are available. That leaves the industrial worker and his family looking not for an apartment—but for a corner of a room someplace.

• **Consumer Goods**—A second yardstick for standard of living comparisons is the low estate of Russian consumer-goods industries. Russian industry, by 1928, had regained its 1913 production level.

Then the Soviets warped it with three successive Five-Year Plans, all devoted to expanding heavy industry at the expense of the light, consumer-goods industries. That left the Russian industrial machine heavily lopsided before World War II.

The war drained more men and materials from the light industries. The German occupation further beat down that section of industry. It devastated western Russia, which had produced well over half of Russia's total output. The Russians shifted hundreds of heavy industry plants—and built many new ones—in the Urals. But they let the consumer-goods plants go.

The end of World War II saw Soviet heavy industries close to prewar production levels; in a few cases they were above. But light industries were hard put to clothe the troops. Their production was from 55% to 90% below 1940—and well below even the 1913 level.

As a result, Russian real wages now are a lot less than they were 20 years ago. Families make up some of the difference by working longer hours, having women work, and with sideline jobs, such as gardening.

• **Better Prospect**—That makes the prospect of World War III bitterly grim for the Russian people.

To step up war production much beyond the 50%-plus share it is now getting of Russian production, the Politburo would have to cut civilian production all around. It would have to be cut sharply and quickly—and there is little in the Soviet living standard that can be sacrificed to war easily. The social effects are hard to foresee. But the Soviets might well find that they must deny even the basic necessities of life to large groups who are not important to the war effort. They were forced to do some of that in World War II.

So—even with its head start on rearming—war would bring the Soviet massive problems.

III. Russian Strategy

No doubt the Kremlin has some strategists who see quick, easy conquests. But the hard-headed Politburo must base its long-range war strategy on these assumptions: (1) Russia would be hurt by atom bomb attacks initially, but would counter by taking over all of Europe; (2) there would be a pause while the Soviets try to organize Europe's industry, and the U. S. organizes its war economy based on the resources of the Americas; and finally (3) total intercontinental war.

Russia's course can be outlined from reports on her war preparations today:

(1) Even more than in World War II, the Soviets will depend on the huge industrial plant growing behind the Urals, in Siberia, and central Asia. The industrial potential of European Russia, which was overrun by the Germans, will be sacrified if necessary.

(2) The "deep space" and "scorched earth" strategy, which slowed German advances in 1941-42, have become part of current industrial planning, rather than last-resort tactics. Russia's defense lines have now been advanced to the Polish, Rumanian, and Hungarian borders, and, in the Far East, to Outer Mongolia.

What's not being done in eastern Europe and western Russia testifies to the Russian plan. Rebuilding of many war-damaged plants is said to be going at a snail's pace. (One exception is the Donets coal mining center, which is up to 75% of prewar output.) Even Russia's metal processing areas in the West, key industries before the war, have seen only partial reconstruction.

(3) In building up Communist parties in the major European countries, the Soviet is forging a powerful weapon. Communist parties throughout Europe have a membership estimated at more than 11-million. In the "combination of revolutionary war with international civil war," which is basic strategy for the Kremlin, they would be counted on to sabotage industry, defense positions and troop movements, and to organize underground armies.

• **Nationalism Problem**—But even fifth columns on a massive scale can't make Stalin's conquest of western Europe easy.

The Cominform's recent denunciation of Marshal Tito highlights one of the Kremlin's bugaboos: The farther the Russians get from Russia, the more they have to grapple with the centuries-old national and cultural differences of the European peoples.

Nationalist spirit has broken try after try to unify Europe, or sections of it. The Communists won't find it easy to overcome.

• **Hitler's Advantages**—Moreover, in organizing Europe, Stalin will have a whole series of problems that Hitler did not have to cope with.

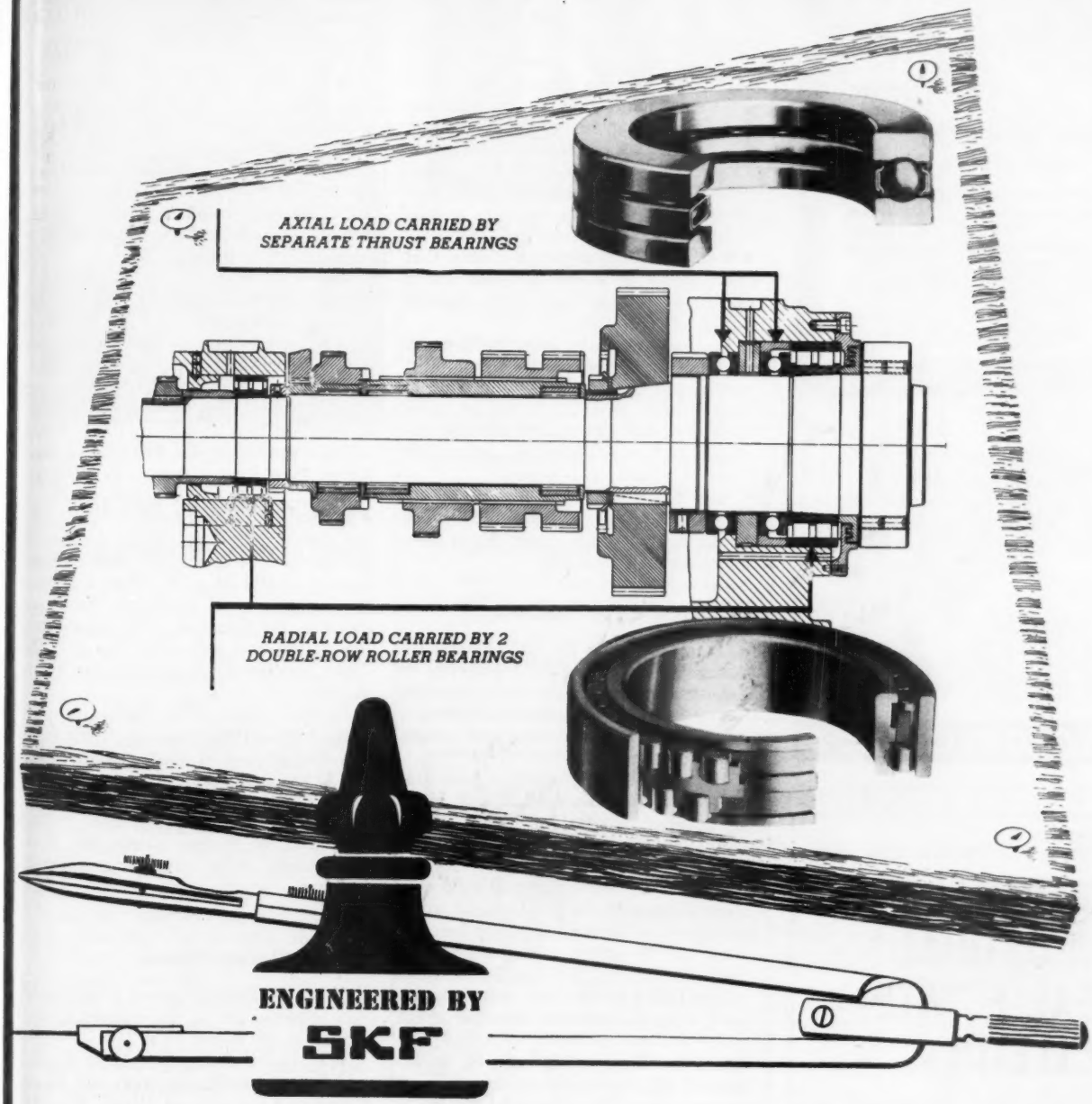
Hitler had his own fifth columns, of course. But he also had the finest technicians in Europe. He was working over short distances and with an excellent transportation system. He could exploit an undamaged and smoothly working industrial machine with reserves of men and materials. He had the added advantage of time: It was two and one-half years from the time he began operations in Poland before he was embroiled in total war. And in the early stages his fighting fronts were never far from his industrial supply bases.

Stalin will not have most of these advantages.

• **Alternatives**—For one thing, whatever the condition of western Europe's industry when—and if—Stalin overruns it, distance will be a major handicap. He might try to transplant key plants into Russia, sacrificing what remains in western Europe as part of extended "defense in depth." Or he might try to operate it as is. If he chooses to operate, his problems in occupying the country will be tough. Stalin will not have trained Russians on anything like the scale of Hitler's legions of technicians. His transportation system will be saddled with the problems of transporting armies and materials over two continents.

That would put a formidable strain on any rail system. We know western Europe's railroads are still in poor shape. We don't know too much about Russia's progress in building up her railroads. A second rail line to Siberia is being completed; other strategic lines, to the Iranian and Turkish borders, for example, are reported to be under construction. But in any case transportation will be a major problem.

• **Blitz Not So Easy**—Military conquest, too, will be much more expensive to



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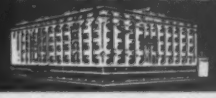

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Stalin than it was to Hitler. One reason why the "blitz" is not likely to work for Stalin as it did for Hitler is that he won't have air monopoly. Hitler's aircraft were practically unopposed in the advances into Poland, into the West, and into the Balkans. And, even if Stalin should gain all the territory that Hitler held, he would have to go on to take all of Scandinavia, Switzerland, southern France, North Africa, Spain, and Portugal—and the British Isles—to neutralize even the near-by bases that might be used against him.

• **Best Bet**—This makes it certain that Stalin won't do so well as Hitler did in organizing Europe—and Hitler himself did not do too well.

Probably the best that the Kremlin can hope for is to use native Communist armies and Soviet panzer divisions to keep Europe down. The Soviet could then draw as much manpower and material into Russia's factories, particularly those in Siberia, as is possible.

But that would involve major logistical problems, and its success might well be limited by manpower. Even now manpower is a headache.

IV. Manpower Problem

To make up for the loss of some 10-million able-bodied men and women in the last war, the Soviets have imported slave laborers from eastern Europe and Asia and have drafted their own people into industry.

But as yet the importees have not been generally efficient, except for a comparative handful of highly skilled Germans. Russia's productivity is not yet back to prewar standards.

So—if war breaks out—Russia will scour Europe for labor. As many workers as can be transported over her railroads will be shifted into the industrial fortresses beyond the Urals.

• **The Police Drain**—But, even now, reports from Russia show that the secret police armies are being increased substantially. They would have to be expanded still more—and swiftly—if European workers were brought in on a large scale. Tying up hundreds of thousands of young and vigorous men on police duty would draw on Russia's military and labor forces by just that much. And the whole process would mean more and stricter controls over people than even the Soviets have known in the past.

V. Targets for 1960

All this underlines the urgency behind the building up of Soviet industry. The size of the task can be seen in the industrial targets set by Stalin for 1960.

Steel production is to be tripled to 60-million metric tons. Coal output will go from less than 200-million metric tons now to more than 500-million. And, over-all, two-thirds of this new industrial capacity will be located in the remote hinterland, east of the Urals. (Apparently, the consumer goods industries will be far behind: The 1960 goals for most consumer goods are not even mentioned in the Stalin program.)

• **Comparisons**—Russia would still be a poor second to the U. S. By 1960, the U. S. may well be producing more than 100-million tons of steel a year. Even if the Russians fulfill their aims, their over-all output will fall far short of what our production is today.

And, in comparison to western Europe, the Russians are likely to be running behind, too. If the Marshall Plan is carried through on schedule, or close to it, the nations of western Europe together will be producing more than 60-million tons of steel and almost 650-million tons of coal in 1951. They will be producing—in 1951—at a rate higher than Russia expects to reach in 1960.

• **Matter of Emphasis**—But totals are not the whole story. There is always the question of how much goes to war. During World War II, when we were producing over-all easily six times as much as the Russians, their munitions production was estimated, by a U. S. Army economist, at perhaps one-third of ours.

In other words: The Russians apparently were getting twice as much military yardage out of what industry they had as we were. That, of course, is what gives them their overwhelming superiority in weapons production today. And that, of course, is why the Russian people today are doing without housing, Sunday suits, knives, forks, buckets—and civil rights.

VI. What Lies Ahead

With the Russian people at this level now, what would be the economic consequences of World War III?

It's clear that the people of Russia and Europe would see crisis and chaos far beyond the scale of World War II. The strength—in manpower, machines, and materials—of two continents would be drained to feed Russia's heavy-industry colossus in the remote East. The men who did not hesitate to starve millions of Russian peasants in the early 1930's to put through their agricultural reforms would not hesitate to starve millions in Europe if it would help win their war.

This planned barbarism, carried through deliberately and not as a result of enemy destruction, would not automatically lose the war for the Soviets. And neither would it guarantee victory. But it would, without question, put the people of Europe and Russia into a new and terrible Dark Age.

C.P.A. PRESIDENT McConachie sees . . .

Canadian Air Prospects Brighten with Two Deals

OTTAWA—Canada's biggest private airline operator and its biggest airplane manufacturer just got big breaks from the Canadian and British governments.

(1) Canadian Pacific Air Lines will be licensed to operate Canada's trans-Pacific air services. (Up to now, this territory has been reserved for the government-owned Trans-Canada Air Lines.)

(2) Britain's nationalized British Overseas Airways Corp. will buy North Star aircraft from Canadair, Ltd., Montreal, to equip its long-haul lines.

• **More Miles**—C.P.A.'s president, G. W. G. McConachie, hopes to operate two services: one to Hong Kong via Kodiak (Alaska), Tokyo, and Shanghai; the other to Sydney via Honolulu, Canton Island, and Fiji.

C.P.A. got the nod because Trans-Canada faced big deficits on its Pacific runs, already showed small ones on its Canadian and Atlantic operations. Under an agreement with Australia, Canada has promised to operate an air service between the two countries. So C.P.A. is taking over.

• **New Market**—For Canadair, Ltd., the decision opens up its first foreign market. The British order is for 22 aircraft (cost: about $700,000 each). Whenever possible BOAC will use British-made equipment for the planes. This will cut into U. S. and Canadian manufacturers who supply Canadair.

The Canadair order followed the failure of Britain's "Fly British" policy. The British-made Tudor II, designed for long-range service, didn't perform up to snuff. But Britain couldn't have bought the North Star planes if the Canadian government hadn't agreed to postpone British debt payments.

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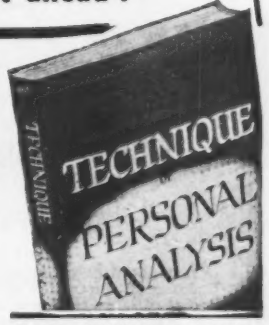

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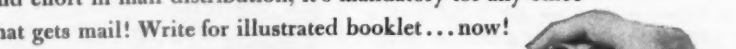

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ECA'S LEDGER

Reports from Washington

Second-quarter ECA operations have begun to roll. Procurement authorizations for the week ended July 31 jumped to $72,861,232—more than two and a half times the previous week's figure. Total authorizations to date: just over $900-million.

Britain got the biggest share this time—$20.5-million; most of it will go to buying lumber from Canada. The Netherlands received $10.4-million; Austria, $8.7-million; Italy, $7.7-million—all for U. S. wheat and wheat flour. France got $7.4-million; Norway, $5.4-million, for U. S. and Canadian wheat and wheat flour. The remainder of the amount was divided between the three western zones of Germany; Denmark; and China.

Other developments:

Intra-European trade:—The Organization for European Economic Cooperation's plan to speed up trade between Marshall Plan nations has been formally presented and approved by ECA Washington. Its purpose: to clear exchange snags, stabilize debts already incurred, and keep down dollar trading between European nations. This is what OEEC has in mind:

(1) A clearing house will be set up to balance out net exchange credits and debits among the western European nations; this will be done in much the way checks and drafts are handled by a big city clearing house. The International Monetary Fund and the Bank of International Settlements at Basle, Switzerland, are being considered for the job. The odds are favoring the latter.

(2) Debt will be stabilized by funding the present short-term demand notes into long-term, low-interest-rate debts. ECA dollars won't be used to liquidate any past debts.

(3) Creditor nations will make loans in their currency to debtor members of OEEC (BW—Jul.31 '48,p84).

To help out, ECA is revising its supplementary allotment machinery. Under the second-quarter allotments $101-million was set aside for priming the intra-European trade pump; most of this went to debtor nations. Now the creditor

nations will be getting the supplementary allotments.

For example: Suppose France wants to buy from Belgium. It has neither dollars nor Belgian francs, and its credit has run out. ECA approves the transaction and gives Belgium—not France—enough supplementary dollars to cover the French order. These dollars are deducted from the French account. Next Belgium makes a Belgian franc loan to France equal to the ECA dollars received. France sets aside an equal amount of French francs in its own local currency pool, according to ECA requirements. After the financial juggling is over, France can go ahead and buy in Belgium. Belgium can use the supplementary dollars supplied by ECA to buy in the Western Hemisphere.

ECA chief Paul Hoffman thinks this machinery will be running by Oct. 1.

Reports from Abroad

From now on, OEEC in Paris will do the screening for dollar allotments. But ECA Washington, of course, will still give a final O.K.

Here is how it will work: With the aid and advice of ECA missions abroad, each of OEEC's members will prepare two programs. One will be a detailed request for commodities to cover the current year; the other a broad program covering the four years of ECA aid. OEEC screens the programs, recommends allotments. ECA Washington has the last word. It works directly with member countries in matters of loans versus grants, dates, and cutbacks, where necessary.

Other developments:

The Netherlands. Dutch authorities were rapped across the knuckles for failing to stick by the ECA provision that 50% of shipments must be carried under the American flag. The Netherlands placed its July shipments on nine vessels, none of which were American. The penalty: no payment for Dutch claims for ECA ocean freight charges between July 9 and 21.

The Dutch have an alibi. They say it isn't clear whether the 50% refers to each individual country or to all countries together. OEEC in Paris is talking this over.

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THE TREND

A Report on Monopolists in Action

From Britain, where the gentlemen's agreement has developed into a broad system of cartels and monopolies, comes a report on monopolists at work. It is of more than casual interest to American business, because it shows where the unlimited use of monopolistic devices can lead.

Probing through the entire field of distribution of building materials, the report represents two years of study by a committee of inquiry, appointed by the government's Ministry of Works. It assembles for the first time the facts and cost figures on the distribution system serving two industries made up of some 140,000 companies employing about 1.5-million people.

Its chief findings will renew the faith of U. S. businessmen who believe in competition. In tracing the working arrangements between the associations of building materials manufacturers and builders' merchants—the distributors—the committee found that a laudable idea had grown to become a stranglehold on the industry.

Some 25 or 30 years ago some builders' merchants in London made an attempt to maintain prices of the goods they sold over the counter. To prevent chiseling, they published price lists regularly. The idea worked. It spread, first through all of London, and then through stage after stage until it covered substantially the whole field through all of England.

At first the idea had been voluntary and was intended to apply only to small-lot sales. But the majority of the merchants abiding by the scheme saw that it was difficult for some to resist cutting prices on quantity sales. They cast around for something to give them leverage against those who were tempted. The result: They got together with the manufacturers. The merchants agreed to maintain retail prices set in agreement with the manufacturers and to handle only the products of manufacturers who made the agreements. The manufacturers, in turn, agreed to stand by their prices and to give the cooperating merchants—and only those merchants—special discounts.

Why Monopoly Was Inviting

These agreements were important to both sides. They gave the manufacturers regular outlets and stable prices. They confirmed a valuable privilege for the merchants and gave them special discounts. In addition, they made it possible to discipline recalcitrants by fining them or denying them the discounts. The agreements spread until the committee could find only a handful of merchants who were not members of one national association or another, and until even government agencies generally could not place large-scale orders directly with the manufacturers on terms as favorable as those granted the merchants.

That the idea intrigued the 3,000 builders' merchants and the manufacturers is shown in one sentence from the committee's report: "Our examination of the field has revealed no industry producing building materials or components in which we can state with confidence that there is free competition in prices."

Its results have made the builders' merchants generally fat and flourishing—particularly during and since the war. The report shows that from 1938 to 1946, their volume of sales rose and gross margins increased, while expenses dropped. The merchants as a whole came out with their net margin of profit more than doubled in the eight years. Everybody benefited—except the customers.

Moreover, says the report, "these pricing agreements . . . prevent or make it difficult for new and improved products to reach the public, except those made by manufacturers within the associations, which can be sold at or above the minimum price. . . . Merchants are prevented from passing on to the public improvements in efficiency in the form of lower prices. There is an induced search for substitutes, which would not arise if a competitive price were charged for the original article. There is a tendency toward the proliferation of services, leading to a waste of manpower and other resources . . ."

With restraint, but without pulling its punches, the report goes on to shoot holes in the arguments of the defenders of the monopolies or near-monopolies maintained by these thousands of little businessmen.

Pat on America's Back

Surprisingly, in the light of charges about restrictive practices in this country today, the British found much to commend in the distribution of building materials in the U. S. A two-man subcommittee toured the U. S. These men decided that the policing effect of the antitrust laws was healthy for the business here. Their report did not suggest that antitrust laws have created a state of free competition. But the Britishers concluded that they do have a marked effect on the whole conduct of business.

The committee put it this way: "Business interests have shown great resource and energy in finding loopholes in the legislation, and in exploiting them, but they are cautious and most anxious to keep within the letter of the law. And slipping through loopholes is a different matter from sailing boldly down the broad stream of monopoly and restrictive agreements."

To the committee, this picture was good reason for enviously eyeing American free enterprise in action, and for recommending that U. S. antitrust principles be applied to British industry.

To Americans, the picture is good reason for pride in our competitive system, and good grounds for suspecting why Socialism has rolled in high gear in Britain.

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